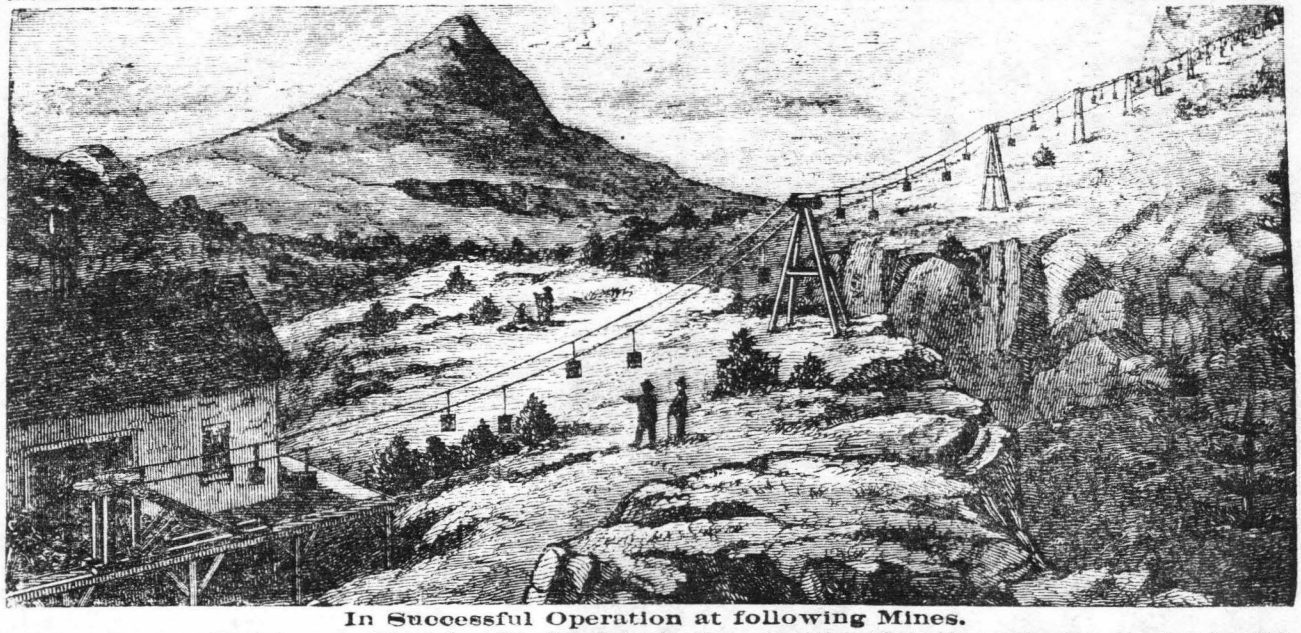
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COLORADO--1883.

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| Mary Murphy Mine, St. Elmo, Colorado, | 5,250 ft. | Gold King Mine, Ames, Colorado, | 2,750 ft. | Champion Mine, Idaho, Colorado, | 6,000 ft. |
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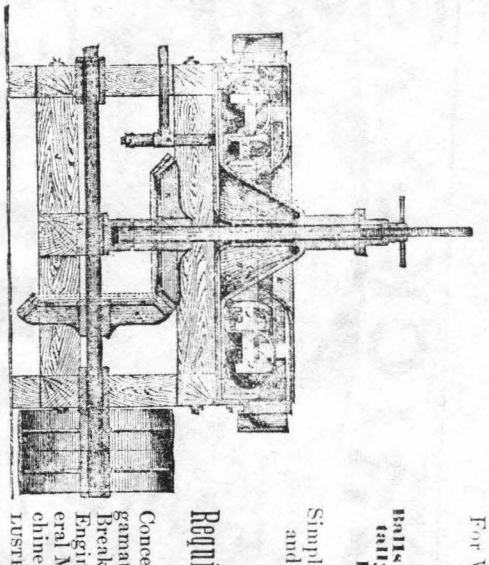
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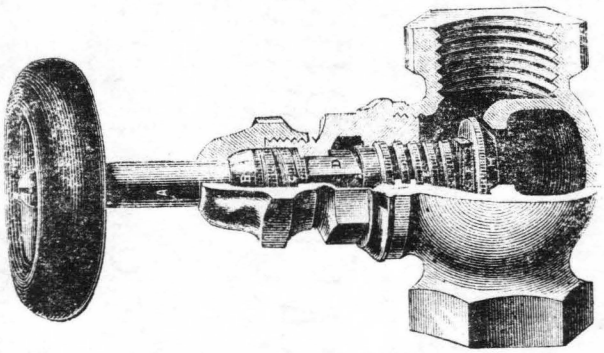


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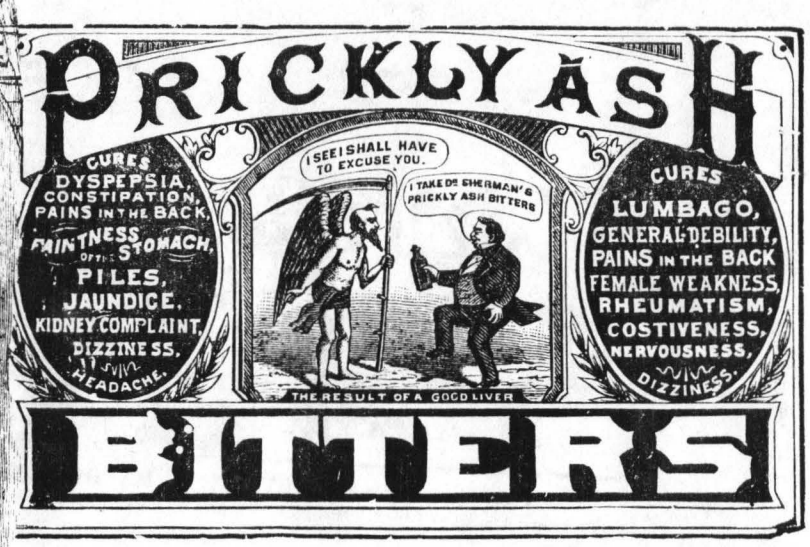
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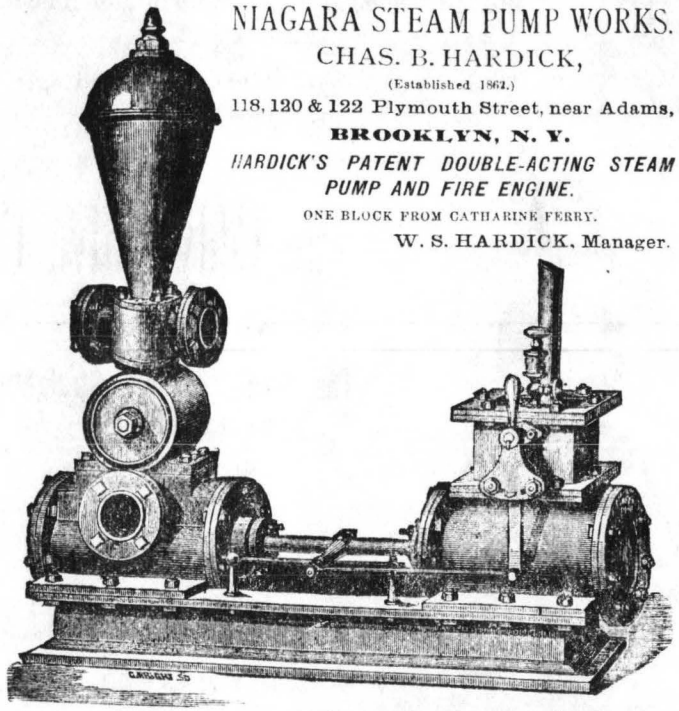
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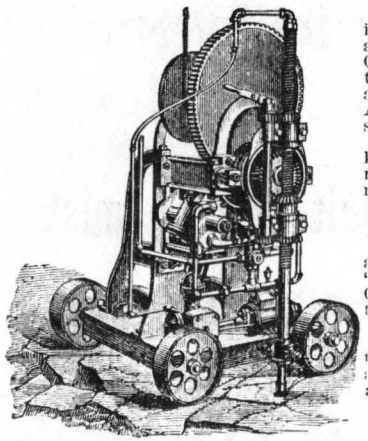
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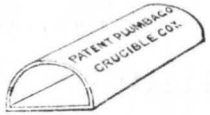
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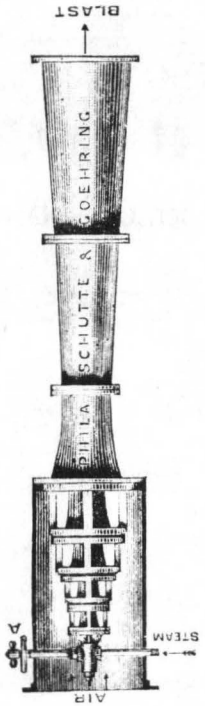
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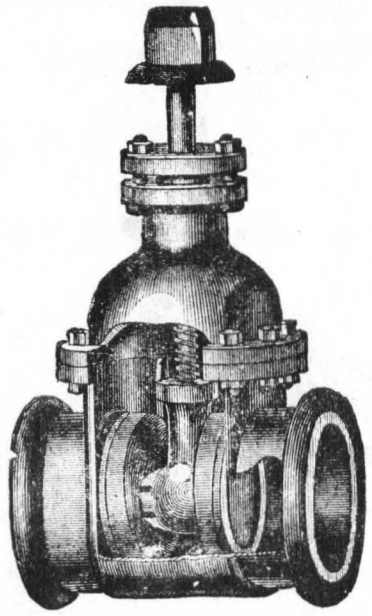
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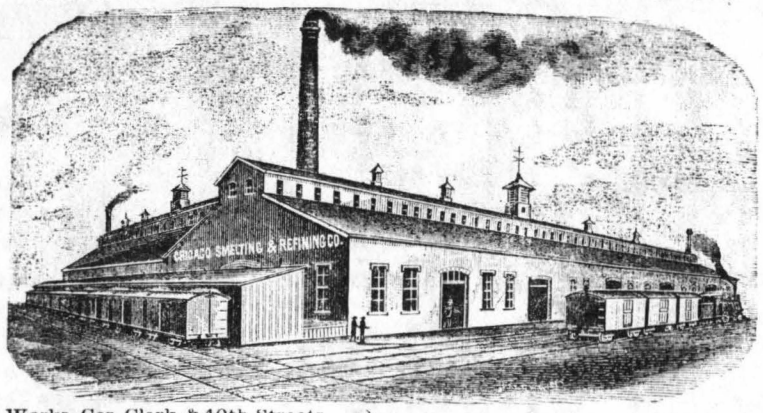
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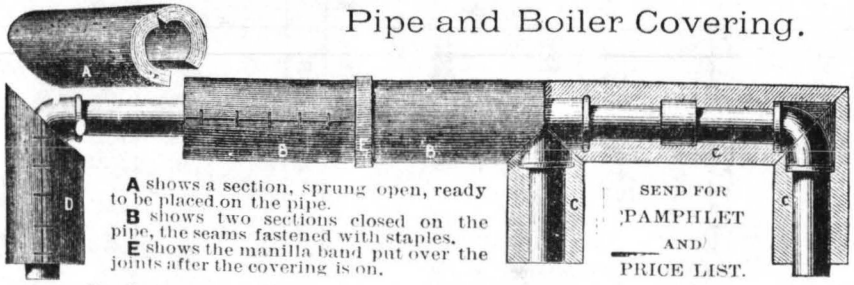
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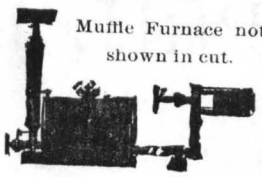
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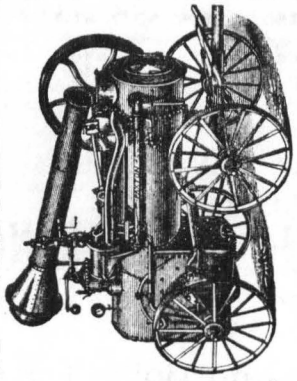
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| 5 | 4½ | 6½ | 21 | 26 | 17½ | 27½ | 22 | 48 | 2 | 48 | 32 | 6 | ..... | ..... | 200 | 3,060 | $ 500 | $ 400 | $235 | 800 | | | | | | | | | | | | | | | | | | | | |
| 6 | 5 | 8 | 22 | 28 | 17½ | 29½ | 24 | 56 | 2 | 56 | 36 | 6 | ..... | ..... | 200 | 4,100 | 680 | 560 | 295 | 900 | | | | | | | | | | | | | | | | | | | | |
| 8 | 6 | 9 | 24 | 32 | 19 | 33 | 28 | 56 | 2 | 56 | 40 | 6 | ..... | ..... | 180 | 4,500 | 850 | 730 | 350 | 1,225 | | | | | | | | | | | | | | | | | | | | |
| 10 | 7 | 10 | 26 | 36 | 21 | 35 | 35 | 60 | 2 | 60 | 46 | 7 | ..... | ..... | 175 | 5,500 | 1,000 | 850 | 400 | 1,470 | | | | | | | | | | | | | | | | | | | | |
| 12 | 8 | 10 | 26 | 38 | 21 | 35 | 39 | 66 | 2 | 66 | 46 | 7 | ..... | ..... | 150 | 5,900 | 1,125 | 975 | 450 | 1,700 | | | | | | | | | | | | | | | | | | | | |
| Special | 8 | 10 | 30 | 40 | 25 | 37 | 41 | 66 | 2 | 66 | 48 | 8 | 36 | 8 | 150 | 6,000 | 1,200 | 1,050 | 520 | 1,900 | | | | | | | | | | | | | | | | | | | | |
| 18 | 9 | 12 | 30 | 42 | 25 | 44 | 39 | 84 | 2¼ | 84 | 56 | 10 | 36 | 8 | 140 | 7,900 | 1,480 | 1,300 | ..... | 2,450 | | | | | | | | | | | | | | | | | | | | |
| 25 | 10 | 14 | 34 | 46 | 27 | 44 | 47 | 84 | 2¼ | 90 | 60 | 12 | 36 | 8 | 140 | 9,000 | 1,700 | 1,500 | ..... | 2,900 | | | | | | | | | | | | | | | | | | | | |
| 30 | 11 | 16 | 36 | 54 | 30 | 46 | 55 | 96 | 2¼ | 96 | 66 | 12 | 36 | 8 | 130 | 12,050 | 2,030 | 1,800 | ..... | 3,600 | | | | | | | | | | | | | | | | | | | | |

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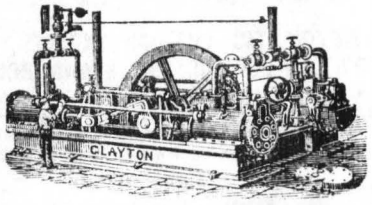
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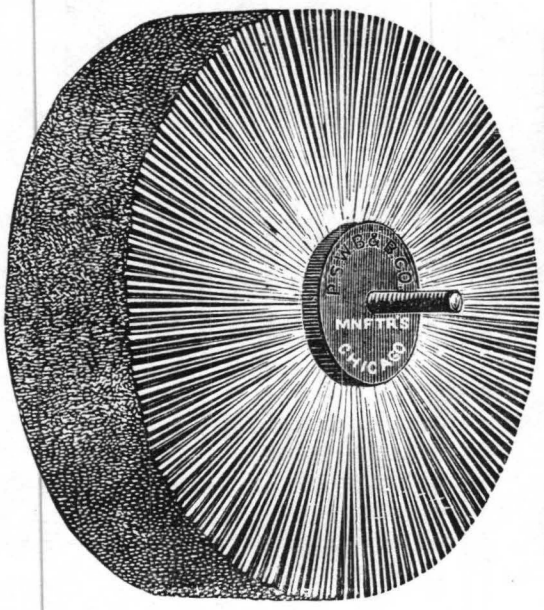



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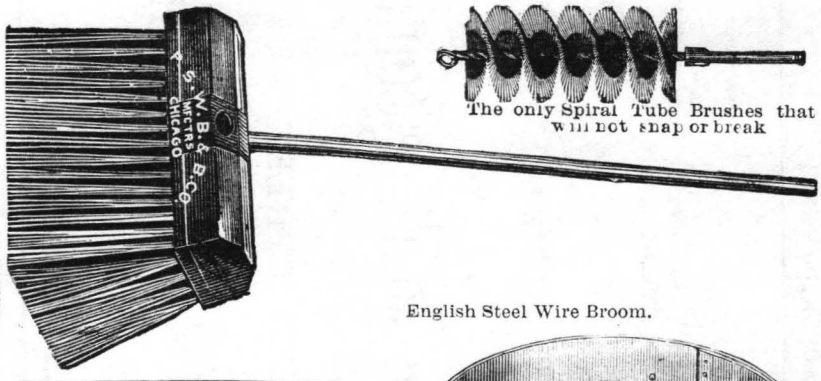
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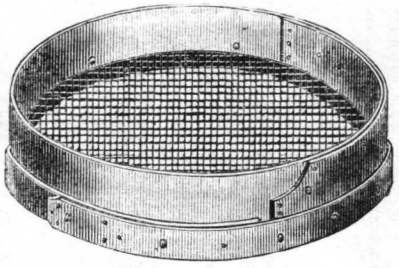



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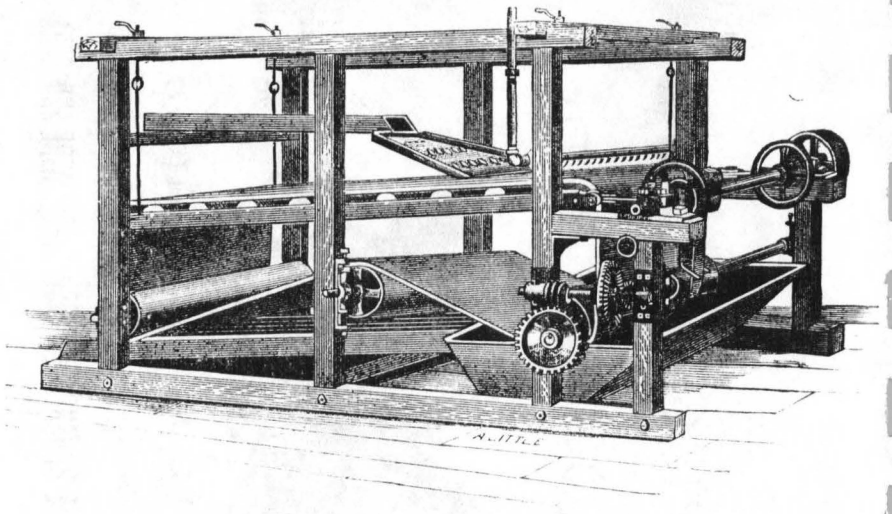
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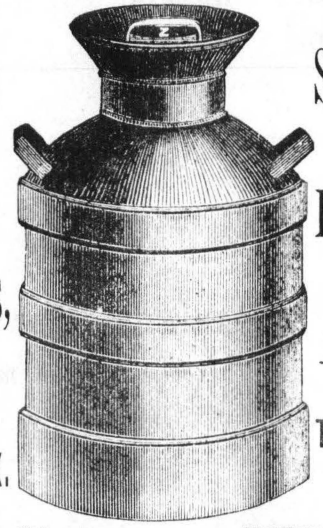
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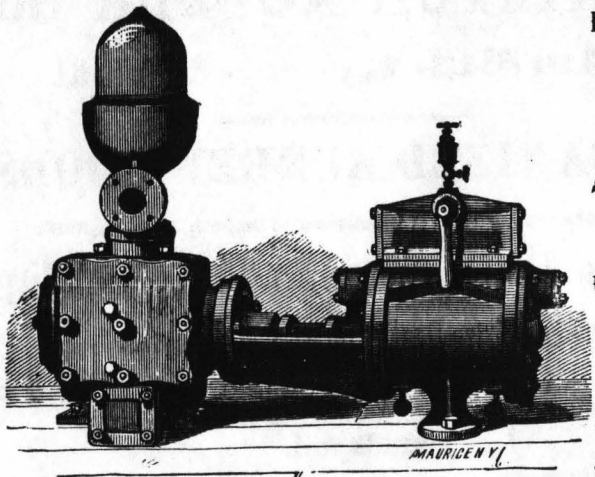

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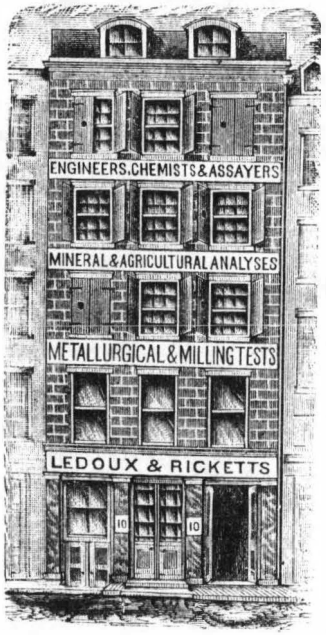
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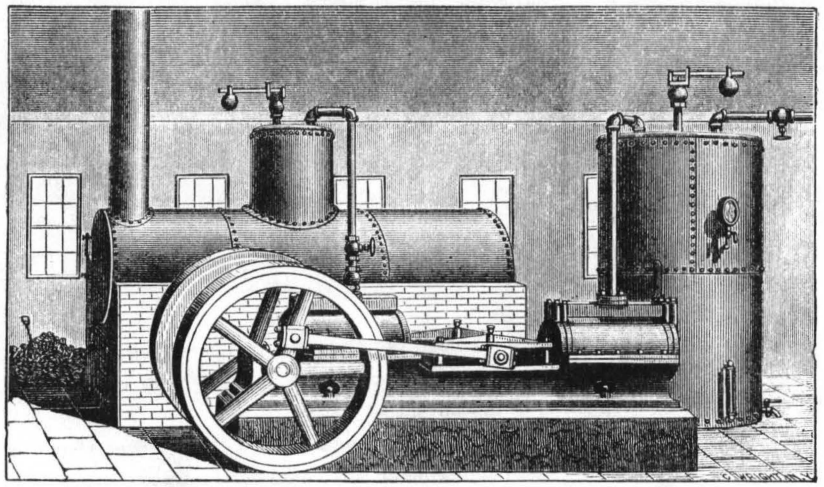
In presenting the COLORADO MINING DIRECTORY to our patrons we have to thank them for the liberality shown us, and crave their indulgence for any short-comings appearing in the work.

The publication, we regret to say, is imperfect, owing, however, to causes readily appreciated. An undertaking of this character is always surrounded with difficulties—some of which are conditional and others inherent to the nature of the work. It was our purpose to furnish the miner and operator with a manual containing fairly accurate data concerning all mines, mining properties, mills and smelters, and mining, milling, and smelting companies in the State. To this end we have devoted a great deal of conscientious labor and cautious vigilance, and the matter has been classified and arranged conveniently. The alphabetical list of properties in each county is preceded by a general introductory touching in more or less detail the geological features, ore characteristics, mineral and other resources, shipping facilities, output, etc. The U. S. Statutes relating to mining matters and the mining laws of Colorado find a place in the work. In short, we aimed to get up a useful book of reference. How nearly we have attained our object we leave others to decide. We did not expect to reach perfection; the difficulties surrounding us were too numerous. We have, however, gained experience, and intend to continue our work and hope to improve it with each issue.

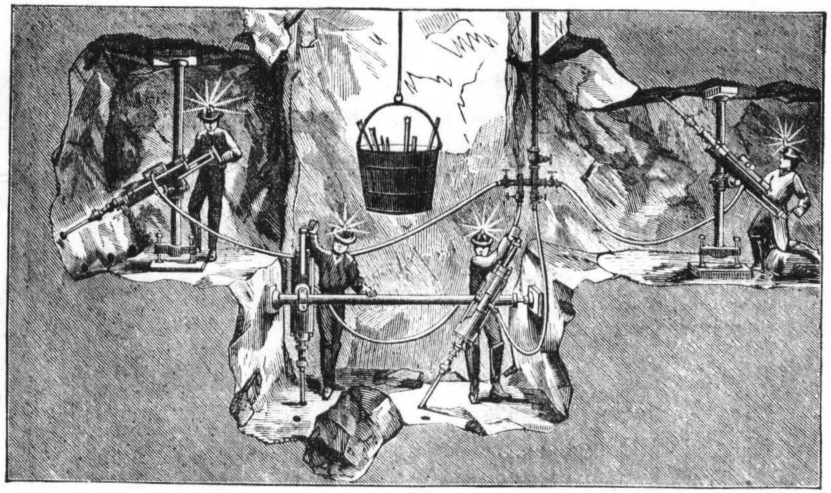
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# COLORADO'S MINERAL RESOURCES.

Previous to giving a description of each and every mine and mining property in Colorado, it is proper to make a general statement of her mineral resources. These are already known to be enormous in quantity, and further discoveries are constantly being made. They constitute the main wealth of the State, and are continually growing more productive and remunerative. Gold, silver, copper, lead, and coal are extensively mined; iron, salt, zinc, mica, and other minerals abound, and some of them will yet cut an important figure. Metalliferous veins are encountered in clusters and belts all through the mountains of this vast region. Coal occurs at intervals along the plains, near the base of the foot-hills, and here and there in the mountains and river valleys. A mineral belt, carrying one or both of the precious, and some of the baser metals, extends almost across the entire State, following to some extent the course of the Rocky Mountains. It also appears on the flanking ranges and outlying foot-hills, east and west of the Continental divide. Each season proves this mineral region to be of greater extent and value than was previously known, and the entire mountain system of Colorado will, at no distant day, be dotted with mining camps.

A belt showing but slight interruptions has been traced from the North Park, and the northern part of Boulder County, south through Gilpin and Clear Creek, thence south-westerly through Summit, Park, Lake, Chaffee, and into Gunnison County. It approaches the point where the great Saguache, or main range, divides into the Sangre de Christo on the south-east, and the San Juan Mountains on the south-west. The belt appears at intervals on the east of these mountain systems or their outlying spurs or valleys, down to the New Mexico boundary.

In the San Juan Mountains, which form the Continental divide on the south, it is rich in silver veins, extending all through the counties of Hinsdale, San Juan, and Ouray. Gold is also found there; and the gold and silver bearing deposits of the Sierra Mojada, and of the hills and valleys skirting the Sangre de Christo, are fast coming into notoriety.

The Saquache range extends from the point of union of the more southerly mountain systems, northward to the Mount of the HolyCross and the head-waters of the Arkansas, and is but another name for a portion of the main Rocky Mountain divide. It forms the dividing line between Gunnison, Chaffee, and Lake Counties, and also separates Summit from the latter. Rich mineral discoveries have been and are still being made, both on its eastern and western slopes.

East of this and of the upper Arkansas Valley, is the Park range of

Mountains, separating the latter from South Park, and uniting with the main range at Mount Lincoln. This, with the foot-hills, is very productive On the western slope are the world renowned carbonate deposits and veins of Leadville—immeasurably rich in silver and gold—and the gold veins and the alluvial deposites of California Gulch. On the range itself and its eastern slopes are vast numbers of deposits and veins. Silver predominat esthere, but gold, copper and lead, are mined.

Northward extends the main range, which, all along its course between Summit and Grand Counties on the western slope, and Park, Clear Creek, Gilpin, and Boulder on the east, is more or less rich in silver veins. Its extending foot hills possess veins and alluvial deposits rich in gold. The outlying mountain spurs, hills, and gulches are also ribbed with metalliferous veins, some productive of silver and copper, others of silver and lead, and others of gold and silver, with one or both of the baser metals. Close beside each other, on this eastern slope, are the famous mining districts of Clear Creek and Gilpin. The latter has produced most of Colorado's gold and the former much the largest part of its silver, up to the time when Leadville came to the front.

Westward, over among the mountains and valleys of SUMMIT, Grand, and Routt Counties, are numerous argentiferous and galenous veins, and gold-producing gulches and placers. Some of these have been worked for years, and others are of recent discovery.

The great central mineral belt of Colorado has a width of from twenty to forty miles, but often branches off, and again contracts, so that the breadth is by no means uniform. Continued discoveries indicate that its extent is by no means ascertained, but constant developments show that only the beginning of its wealth has been found.

There never has been a time or locality more favorable for individual or company investments or organizations than the present among the mines of Colorado. With a reasonable amount of ready capital to open and push mining development, a harvest is very sure to follow that cannot be blighted by floods,frosts, or insects, nor increased nor diminished in value, but one that is certain,substantial, and enduring—the pure metal itself. This product represents the basis of all property and wealth.

The mineral resources of Colorado have hitherto been imperfectly appreciated. Recent discoveries and the result of well directed labor, aided by superior mechanical and scientific processes, are attracting the attention of capitalists all the world over, and the present progress and developments have placed Colorado ahead of all other sections in the production of the precious metals.

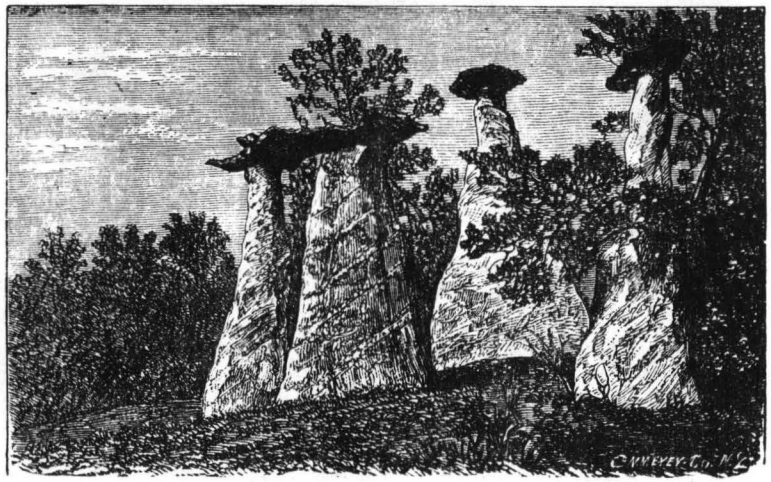
Mining, with the help of moderate capital, is one of the most certain and profitable industries in which men of enterprise can engage. The more thoroughly and systematically mines are worked, and the greater the mining facilities for the reduction of ores, the more satisfactory will be the amount of bullion produced. Colorado is now amply supplied with milling, reducing, and smelting facilities, and good prices are paid for ores.



Capitalists in the older States, where rates of interest are low, and speculative enterprises uncertain and more hazardous than mining for gold and silver, can strike the path to certain fortune, if they will organize companies controlling ample ready means to develop mines, entrusting the management of the same to honest and efficient business men and practical miners. This done, and the better class of the property secured, there would be no such thing as failure but success would be inevitable.

The day of unsuccessful experiments and losing investments has gone by. Colorado has the mines, and now her miners and mill-men know how to work them and how to reduce the ores. Skilled labor is on the ground, and metallurgists and mineralogists thoroughly acquainted with their profession and the character of veins and deposits encountered, are near at hand. With their assistance, and that of judicious investments, intelligent direction and proper economy, the capitalist need fear no loss.

Careful investigation of the subject shows that there has been immeasurably less loss from capital wisely invested in mines, and generally for greater profits, than have been realized in any commercial or manufacturing pursuits, or in railway stocks or operations. With the largest and best mineral belt in the world, unsurpassed railroad connections within and without, ample reducing and smelting works, a first-class ore market, cheap supplies, and countless veins of a very high average value, the Rocky Mountains certainly afford the true field for future investments and rare opportunities for success.



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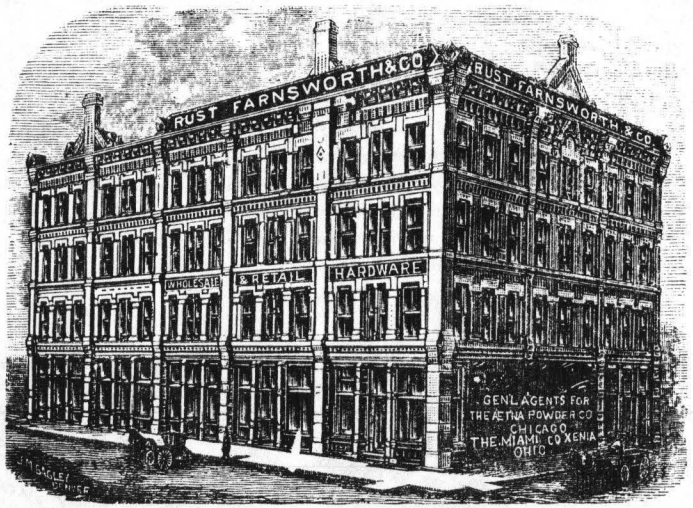
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# Arapahoe County.

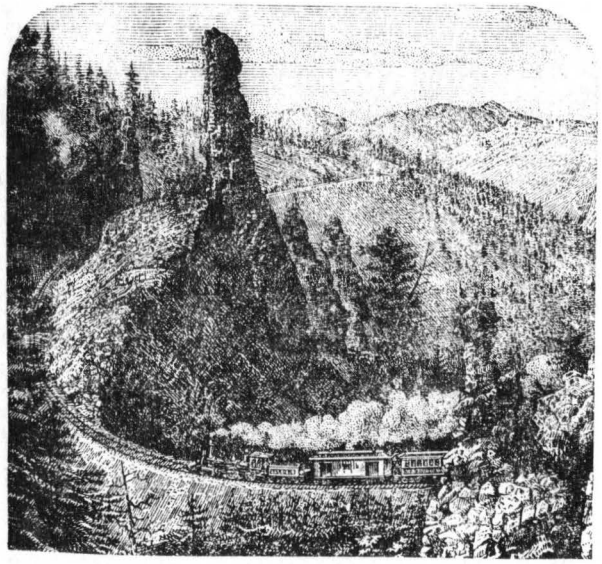
Viewed from a mining stand-point, this County is important from the fact that Denver, the capital of the State, is within its limits, and also its county seat. The situation of the latter at the base of the foot-hills makes it a natural concentrating point for the State's products, as well as a desirable distributing point for goods to be used within the State limits, and holds a central position, not merely in the railway systems between the Missouri River and the Rocky Mountains, but also in those of Colorado, thus affording good facilities for the transportation of ores from the mountain towns to the Denver smelters and the shipment of the goods and manufactures of the States east of it to the mining camps. It moreover possesses, with Pueblo, the most favorable conditions for the erection of processes for the treatment of all kinds of ores; and as a result it has in successful operation two of the largest and most complete smelters in the world, besides some sampling works, which turn out an aggregate of over $8,000,000 per annum in bullion—a description of which will be found in their proper places. The area of the County is 4,860 square miles; and it has an estimated population of 80,000.

**Boston & Colorado Smelting Co. (The).**—Incorporated under the laws of Massachusetts May 11, 1867; capital stock $1,000,000 in 10,000 shares of $100 each, non-assessable; president, J. W. Converse, Boston; secretary and treasurer, J. Warren Merrill, Boston; general manager, Hon. N. P. Hill; acting manager, Henry R. Wolcott; metallurgist, Richard Pierce—all Denver: offices at Argo and 15 to 20 Cheesman Block, Denver; owns a smelting-works, situated at Argo, two miles north-east of Denver, on the Colorado Central Division of the Union Pacific Railway, erected in 1878, under the supervision of the present general manager of the Company, and consisting of the following buildings: Ore and calcining house 600x120 feet, with a wing thereto attached 33x91 feet; smelting-house 425x24 feet; refining-house 293x64 feet, with three wings 41x78, 31x163, and 43x64 feet in size, respectively; copper smelting-house 28x63 feet; two coal-sheds 51x200 feet each; barn and cooper-shop 35x70 feet; store-house 30x32 feet; round-house 15x51; and office, counting-room, and laboratory 42x81 feet in size, constructed of stone, covered with a superior quality of corrugated iron roofing, and equipped with the latest and most improved machinery, selected with reference to the extraction of the precious metals in a manner alike profitable to the miner and the Company. The works are surrounded by a substantial stone wall, and have a capacity of treating 150 tons per day of twenty-four hours—which the Company purchases in Colorado, New Mexico, Utah, and Montana, giving for the same the highest possible prices consistent with sound and judicious management.

**Colorado Ore Sampling Company (The).**—(Unincorporated); manager, George W. Peirce, Denver, Colo.; office at works; works, which consist of building 100x50 feet of iron and brick, are situated at foot of Thirteenth street, near Rio Grande Depot, in Denver, Colo., and contain Blake Crusher, Cornish Rolls, Revolving Screens, etc, equipped with engine, fifteen-horse power, and has a capacity for treating fifty tons of ore per day. The Company do not buy ores, but sample and sell for the miners to the highest bidders, deducting a percentage for their work only.

**Denver Ore Sampling Co.**—Incorporated under the laws of Colorado, April, 1882; capital stock, $18,000, in 180 shares of $100 each; general manager, F. Dillingham, Denver; offices 249 Sixteenth street, Denver, Colo., and at works. Works situated on Thirty-seventh street, Denver, Colo., and consist of one brick building 124x50 feet, containing two Dodge Improved Crushers, two sets Cornish Rolls, one Hendrie & Bolthorf Grinder, worked by engine, thirty-five-horse power; capacity, 100 tons of ore in twenty-four hours; built by Fraser & Chalmer, of Chicago, Ill.

**Grant Smelting Company.**—(Unincorporated) composed of J. B. Grant, Edward Eddy, and W. H. James, all Denver, owns a smelting-works, situated on Cottage Avenue and East St. Vincent street, Denver, which were erected October 8, 1882; it is the largest and one of the most complete establishments for the treatment of ores in the world; the works are built on fifty acres, bordering on the Platte River; the main building is 230 feet in length by 100 feet in width; constructed of brick and iron; the first, or ground floor, being used for the mixing of ore, and has a capacity for holding 3,000 tons, underneath which and on one side of the building, but running its entire length and having a width of thirty and height of twenty feet, is the furnace-room, containing nine stocks, or water-jacket furnaces, of Fraser & Chalmer's make; the bottom or brick portion of which are eighty and one-half inches in length and thirty-six in width, while the upper or iron portion is eighteen feet in height each—or an entire capacity for the whole of 300 tons of ore per day; the buildings are equipped with the latest and most improved machinery and conveniences for the rapid and cheap treatment of ore, among which last, might be mentioned its being on the line of the railroad, whereby fifty cars can be unloaded at the same time Its returns to January 1st, for the two and three-fourths months of 1882 that it was in operation, were $1,337,220, showing an average output per year of $5,000,000 in bullion.

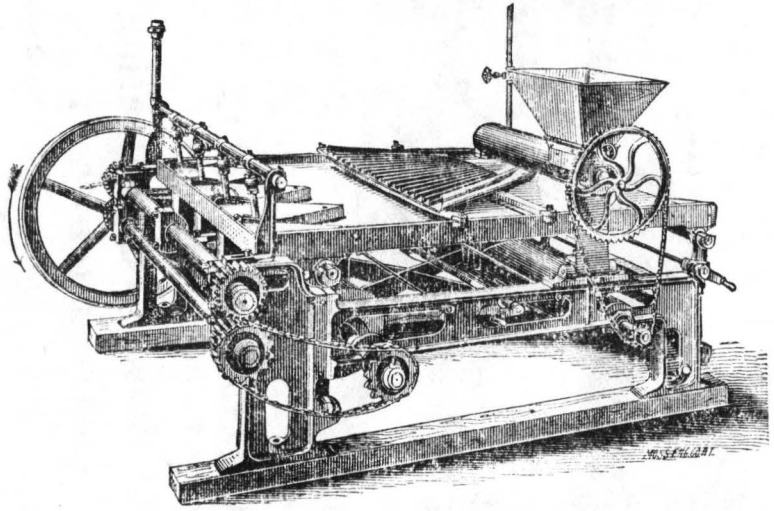




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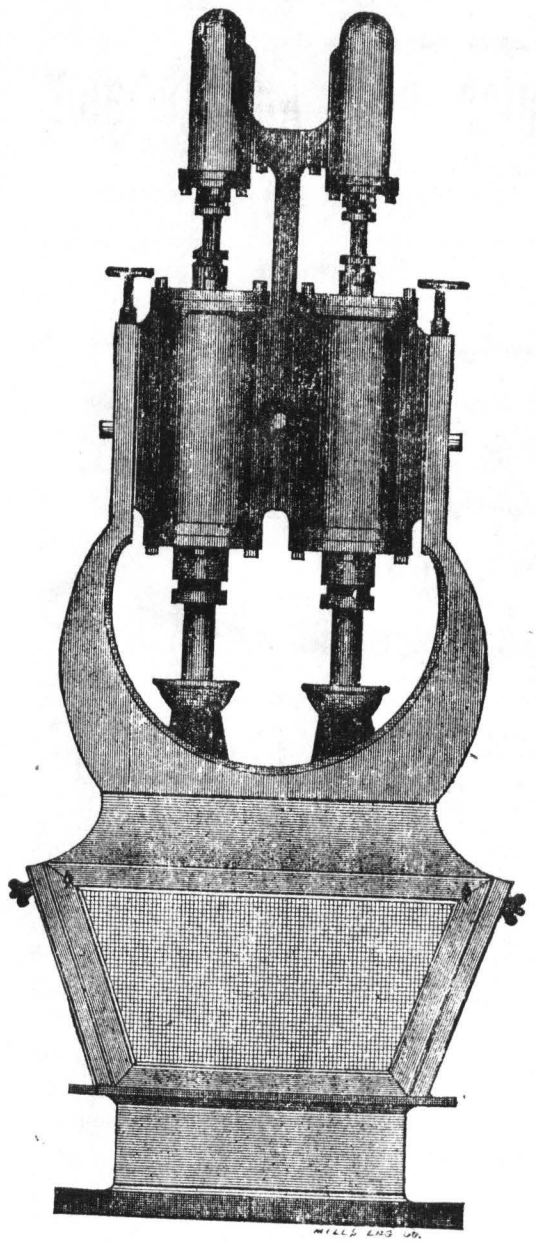
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DENVER, - - - - COLORADO.

# Boulder County.

This County embraces 792 square miles and has an estimated population of 13,000. It is situated on the east side of the Continental divide and adjoins Gilpin and Jefferson Counties on the north. The formation is properly described as granitic, and the veins as true fissures, continuous and well defined to the greatest depths thus far attained; some of which are silver-bearing and others gold-bearing, the former occurring principally in the Caribou district, situated in the south-west corner of the County and the latter in the Central district, embracing the towns of Jamestown, Balarat and Springdale, the Ward, Gold Hill, Sunshine, Sugar Loaf and Magnolia districts.

Touching this subject the State Geologist's report for 1882 says, "The mines of this County are in quite as healthy a condition as they have been at any time within the past ten years. They are very generally operated for actual profits rather than for the purpose of creating a fictitious value for the stocks of the various companies. The 'new process' craze has had and is still having a very extended influence, greatly to the detriment of the County's development at home and its reputation abroad. Within two years several mills have been erected at a cost of hundreds of thousands, containing 'processes' the principles of which were tested and condemned many years ago; and if the parties who furnished the capital for these enterprises had consulted metallurgists of ability and integrity, they would have saved themselves much annoyance and expense, and the country would have escaped much ridicule and consequent loss of prestige. While the failure of these schemes has not injured the mines, they have nevertheless prejudiced capital against the districts where they are located because the want of success is most always charged to the refractoriness of the ores or to their poverty, rather than to the true causes."

There are a large number of valuable mines in Boulder County, some of which have yielded very well in the past, but owing to various causes (none of them, however, to the poverty of the lodes), are at the present time wholly unproductive. A few have quite recently been put in operation, and it is hoped that many others will soon be in a like condition. The mines of this County if worked steady and under competent management, are quite capable of returning over six times as much as they are now doing. In 1882 the output was $550,000 in about equal proportions of gold and silver, but we trust that the annual yield will soon be much greater.

There are some rich placer mines in the Central district, but not having been worked to any considerable extent during the past two years, have added very little to the general output.

**Alice.**—I. F. Monell, Wm. E. Guilder, Henry Monell, and Hugh Jamison, all Boulder, Colo., owners; claim 1500x150 feet, situated on Melvina Mountain, Gold Hill mining district, nine and one-half miles from Boulder; fissure vein, with a pay streak of six inches of quartz carrying tellurium and grey copper, which assays $40 per ton; developed by shaft eighteen feet in depth.

**Alice Bell.**—H. W. Cotton, Geo. B. Handy, H. Emhart, and S. M. French, all Jamestown, Colo., owners; claim 1500x150 feet, situated in Castle Gulch, Central mining district, twelve miles from Boulder; located 1882; fissure vein, with a crevice of three feet and a pay streak from three to six inches of quartz carrying tellurium, developed by shaft twenty-five feet in depth.

**Alconda.**—Timothy P. Connor and others, of Central City, Colo., owners; claim 1500x150 feet, situated in Magnolia mining district, three-fourths mile from Magnolia; located 1882; fissure vein, with a crevice varying from fourteen to eighteen inches; ore, quartz carrying tellurium; assays three and three-fourths ounces of gold per ton; developed by shaft twenty-five feet in depth.

**Alconda.**—Mel. Marston, D. S. White, both Magnolia, and Al. Titus, Boulder Colo., owners; claim 1500x150 feet, situated one-fourth mile from Magnolia, in Magnolia mining district; located 1882; fissure vein, with a crevice of six feet and a pay streak carrying from three to twelve inches of tellurium in quartz, which assays four ounces of gold per ton; developed by four shafts, ranging from ten to fifty feet in depth.

**Alturas.**—John Williams, Geo. Newcomb, and Daniel Drummond, owners—all Gold Hill; claim 50x1400 feet; located 1871, and patented; situated on Gold Hill, Gold Hill district, twelve miles from Boulder; vein, a fissure; average width six feet; two pay streaks four and seven inches wide, respectively; ore, quartz carrying tellurium, free gold, and native silver; average value, $65 per ton; developments, main shaft seventy five feet, and one other shaft fifteen feet deep, one drift seventy-seven feet in length; total yield, $3,500.

**American Consolidated Gold and Silver Mining Company.**—Incorporated under the laws of Connecticut, in 1877: capital stock $1,000,000, in 100,000 shares of $10 each; offices Sunshine, Colo., and 31 Broad street, New York; owns American and Ajax, two claims, 250 x1500 feet; located 1874; situated in town of Sunshine, Gold Hill Mining district, six miles from Boulder; vein a fissure; average width two and one-half feet; pay streak from two inches to eighteen inches; nature of ore, quartz carrying tellurium, of gold and silver, sylvanite, petzite, calaverite, coloradoite, and free gold in quartz gangue; average value of first-class ore $2,000, second-class ore $500, and third-class ore $150 per ton when sorted; developments, main shaft 400 feet deep; five levels, 40, 100, 140, 200, and 300 feet from surface respectively, aggregating 1,000 feet in length; improvements, shaft-house, 30x60 feet, containing a hoisting apparatus, twenty-horse-power engine, machinery for crushing and sampling ore, and one steam pump; assay laboratory in connection with office.

**American.**—George W. Rearden, Jamestown, Colo., owner; claim 1500 x150 feet, situated six miles from Jamestown and sixteen miles from Boulder; located 1880; fissure vein, with crevice from five to eight feet, and pay streak from four inches to two feet of quartz carrying free gold, which assays from $100 to $300 per ton; also a large body of low-grade ore running from $20 to $40 per ton; developed by three shafts, twenty, forty-five, and fifty feet in depth, respectively, and adit on the vein 175 feet in length.

**Aragon.**—C. W. Smith, J. H. Jones, and E. Mahan, all Sunshine, Colo., owners; claim 1500x150 feet; situated in Gold Hill Mining district, one-half mile from Sunshine; located 1878; fissure vein, with crevice of two feet and pay streak of three inches of quartz carrying tellurium, which assays $800 per ton; developed by shaft fifty-four feet in depth.

**Argo.**—E. L. Hubbard, New Mexico, and Theodore Clemens owners; claim 1500x150 feet; situated three-fourths of a mile west of Jamestown, in Central Mining district; located 1866; vein, a fissure, with crevice eight feet in width, and pay streak from six inches to three feet in width, containing galena, iron, and copper pyrites and free gold in quartz, which average on assays $72 per ton; developed by shaft seventy feet in depth.

**B. D. & D. B.**—B. Brown and A. J. Kimber, Gold Hill and Altona, Col., owners; claims 1500x150 feet each; situated on Gold Hill,



Gold Hill Mining district, ten miles from Boulder; located 1880; fissure veins, with crevices of four feet, and pay streaks from four to fifteen inches of tellurium and gold quartz, which mill-runs, when sorted, $50 per ton; developed by shafts and drifts aggregating 100 feet.

**B. F. Smith.**—E. Rowland, Wm. G. Pell, and Anthony E. Arnett, all Boulder, Colo., owners; claims 1500x150 feet; situated on Golden Age Hill, Elk Horn Mining district, one and one-half miles from Jamestown; located 1876; fissure vein, with crevice from two to six feet, and pay streak from four to ten inches of quartz carrying free gold, which assays ten ounces of gold per ton; developed by shaft 100 feet in depth, and other shafts aggregating 133 feet.

**Balarat Mills.**—W. H. Lessig, B. H. Eaton, S. S. Kennedy, and Richmond Bros., all Denver, Colo., owners; stamp-mill and concentration-works situated at Camp Balarat, eighteen miles from Boulder; the main building is 60x24 feet, and contains ten Stamps, four Frue Vanners, Blake Crusher, Cornish Rolls, etc., and has capacity for treating twelve tons of ore per day.

**Bald Eagle.**—F. P. Rosengarten, Theodore Clemens, and L. Monteau, all Jamestown, Colo., owners; claim 1500x150 feet; situated one-half mile from St. Vrain, and six miles from Jamestown; located 1876; fissure vein, with crevice of ten feet, and pay streak from eight to twelve inches of gray copper and galena in a quartz gangue, which assays six ounces of silver and twenty-two per cent of copper per ton; developed by shaft sixty-five feet in depth.

**Baltimore Belle.**—Owned by W. R. Lafourcade, Philadelphia, and H. B. Benton, Jamestown, Colo.; claim 1500x150 feet; situated on Baltimore Belle Mountain, Central Mining district; vein a fissure, showing a crevice averaging three feet in width, with pay streak of fourteen inches, first-class ore, after sorting, giving returns ranging from $966.95 to $10,246.95 per ton, while second-class ore will average $75 per ton; the character of the ore is tellurium and rusty gold in quartz; developments consist of one main shaft seventy-six feet in depth, one shaft twenty-seven feet in depth, with drift at bottom fifty feet west, connecting with main shaft for air purposes; west of main shaft a cross-cut tunnel has been run, cutting the vein eighteen feet in depth.

**Band of Hope.**—J. R. Bennett and Walter Harris, Sugar Loaf and Boulder, Colo., owners; claim 1500x150 feet; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, twelve miles from Boulder; fissure vein, with crevice from one to three feet of quartz and galena, which assays from $100 to $600 per ton; developed by shaft 140 feet in depth.

**Baron.**—Clement C. and Frank R. Eddy and A. R. Wert, all Salina, Colo., owners; claim 1500x150 feet; situated on Melvina Hill, Gold Hill Mining district, nine miles from Boulder; located 1875; fissure vein, with crevice of five feet, and pay streak from four to twelve inches of quartz carrying tellurium, which mill-runs, when sorted, from $100 to $2,000 per ton; developed by two shafts twenty and seventy feet in depth, and levels aggregating 100 feet; has produced $10,000.

**Bates Mill.**—Owned by the Caribou Cons. Mining Company; situated on North Boulder Creek, Grand Island Mining district, three miles from Caribou, and twenty-three miles from Boulder; has a capacity for treating ten tons of ore daily.

**Beecher and Tilton.**—Cyrus Taylor, and J. B. Tomlinson, Jr., both Springdale, Colo., owners; claim 3000x150 feet; situated on Lee Hill, Central Mining district; two miles from Sunshine and eight miles north-west of Boulder; located 1875, fissure veins, with crevices from two to four feet, and pay streaks from six to eight inches of quartz carrying tellurium and free

gold, which assays $78 per ton; developed by shaft forty-one feet in depth and adit twenty-seven feet in length.

**Belcher.** — John A. Ellet, Boulder, Colo., owner; claim 1500x50 feet; situated on Caribou Hill, Grand Island Mining district, and is patented; fissure vein, with crevice of four feet, carrying galena and grey copper in quartz; developed by shaft 120 feet in depth; has produced $3,000.

**Bell.**—A. J. McCorkle, T. J. Laferty, and C. L. Edwards, all Jamestown, Colo., owners; claim 1500x150 feet; situated three-fourths mile north of Jamestown, Central Mining district; the vein is a contact four feet in width of quartz, carrying some galena, which assays $75 per ton; developed by shaft twenty feet in depth.

**Belle.** — Barrett, Steelsmith, and others, Jamestown, Colo., owners; claim 1500x150 feet, situated on Little Jim Creek, one mile from Jamestown and sixteen miles from Boulder; located 1883; contact vein sixteen inches were of iron pyrites and galena in a quartz gangue; developed by shaft twenty-five feet in depth.

**Bendigo Placer.**—W. H. Gifford, Jamestown, Colo., owner; comprises forty acres of placer grounds; situated in Central Gulch, Central Mining district, one and one-half miles from Jamestown; developed by 100 feet of flumes.

**Big Blossom.**—Owned by F. L. Higby, Longmont, Colo.; claim 1500x150 feet; situated in Castle Gulch, Central Mining district, near Springdale; patent in process; vein a fissure, with a crevice varying from three to six feet in width, the pay streak being from six to twenty-four inches in width, containing rich tellurium ore in deposits and free gold quartz; mill runs on the tellurium ore, after sorting, have given as high as $10,000 per ton, but an average mill-run is about $150 net; developed by three shafts, twenty, sixty, and ninety feet in depth, respectively; has produced $8,000.

**Big Blossom.**—Richard and Nelson Jackson, Salina, Colo., owners; claim 1500x150 feet; situated one-fourth mile from Salina, Gold Hill Mining district; located in 1879; fissure vein, with crevice of five feet, and pay streak of eighteen inches of galena and copper in quartz gangue, which assays from $50 to $100 per ton; developed by shaft fifty feet in depth and tunnel fifty feet in length.

**Big John.**—John Wyler and W. B. Williams owners, both of Nederland, Colo.; claim 1500x150 feet; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, ten miles from Boulder; located 1876, and patented; vein a fissure three and one-half feet wide, vein matter quartz carrying tellurium in pockets, which assays from 2 to 100 ounces of gold per ton; developed by shaft ninety feet in depth.

**Big Thing.**—A. E. Arnett & Co., Boulder, Colo., owners; claim 1500x150 feet; situated near Jamestown, in Central Mining district; located in 1863; vein a fissure, from four to six feet in width, and contains a large body of fluor-spar carrying galena and iron, from which shipments have been made ranging from $25 to $75 per ton, with allowance made for fluor spar on account of its valuable qualities as a flux; it has for developments one main shaft eighty feet in depth, with some little drifting.

**Big Tunnel.**—Nicholas Meyer, Jacob Eiserle, and Henry Bletzheim, all Gold Hill, Colo., owners; claim 1500x150 feet; situated at town of Salina,



eight miles from Boulder; located 1882; vein a fissure four feet wide, pay streak five inches of quartz, carrying tellurium which assays $60 per ton; developed by three shafts, ten, twenty and twenty-five feet in depth respectively.

**Black Cloud.**—E. Rowland, Boulder, Colo., owner; claim 1500x 50 feet; situated on Big Horn Mountain, Gold Hill Mining district, one and one-half miles from Salina; located 1873, and patented; vein a fissure from four to six feet wide, pay streak from five inches to twenty inches of galena, grey copper, and free gold in quartz, which assays from one to four ounces gold and thirty ounces silver per ton; developed by tunnel 500 feet in length, and two other tunnels 189 and 207 feet long, respectively. The same party owns the Gold Hill Credit Mobelier, Evening Star, Manganese, White Pilgrim, and Uncle Sam, which is developed by 584 feet of shafting.

**Black Cloud Concentrator.**—E. Rowland, Boulder, Colo., owner; situated on Gold Run at town of Somerville; building frame 100x36 feet, containing three sets of Cornish Rolls, ten Double Automatic Jigs, worked by a thirty-horse-power engine, and has a capacity for treating thirty tons of ore per day; erected by Fraser & Chalmers, of Chicago.

**Black Hawk.**—A. McCormack and E. Lynch, both Langford, Colo., owners; claim 1500x150 feet; situated in Magnolia Mining district, twelve miles from Boulder; located in 1882; vein a fissure five feet in width, containing quartz and argentiferous galena, which assays twenty-five ounces silver per ton; developed by shaft fifteen feet in depth.

**Black Prince.**—Daniel Drummond, John Williams, and M. J. Holt, proprietors—all Gold Hill; claim 1500x150 feet; located 1876; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder; vein a vertical fissure, trending north-east and south-west; average width two feet; pay vein four inches; nature of ore, tellurium and free gold in a quartz gangue; average value, $40 per ton; main shaft eighty feet deep.

**Bona Ventura.**—Owner Angelo Ruvera, Salina, Colo.; claim 1500x150 feet; situated in Gold Hill Mining district, at Salina; located 1878, and patented; vein a fissure, three feet wide, and pay streak from three to six inches of tellurium and free gold in a quartz gangue; assays from $50 to $100 per ton; developed by tunnel sixty feet in length and shaft ten feet in depth.

**Bondholder.**—Owner Mrs. L. R. Evans, Jamestown, Colo.; claim 1500x150 feet; situated on Bondholder Mountain, one mile from Jamestown; located 1877; contains two fissure veins four feet, and pay streak from ten to eighteen inches of tellurium and free gold in a quartz gangue, which mills when sorted from $50 to $2,000 per ton; developed by shaft 100 feet in depth and two cross-cuts twenty-seven feet in length and two levels thirty-five feet in length each; aggregate output $6,500.

**Boreas.**—Owners T. J. Lafferty and others, Jamestown, Colo.; claim 1500x150 feet; situated in Central Mining district, eighteen miles northwest of Boulder; located 1879; vein a fissure, one and one-half feet wide, and pay streak from four to ten inches of quartz carrying tellurium, which assays from $50 to $300 per ton; developed by tunnel forty feet in length.

**Boston.**—Owners Henry Blitzheim, Henry Ritgley, and Joseph Lahmon, all Gold Hill, Colo.; claim 1500x150 feet; situated on Buckhorn Mountain, three-fourths mile from Salina; located 1879; vein a fissure, four feet wide and pay streak twelve inches of quartz and tellurium,

which assays $40 per ton; developed by two shafts ten and forty feet in depth, respectively.

**Boulder and Inter-Ocean Mining Company (The).** Incorporated under the laws of Colorado; capital stock $100,000 in 10,000 shares of $10 each, non-assessable; president, M. F. Leech; secretary, F. Shank; superintendent, Philip J. Lonergan—all Boulder, Colo.; office Boulder, Colo.; owns the Inter-Ocean, 1500x150 feet; situate one-half mile from Magnolia, Magnolia Mining district; located 1880; fissure vein from four to ten feet, and pay streak from one to twenty inches of quartz and tellurium, which assay from $100 to $20,000 per ton; developed by shaft sixty feet in depth and a tunnel fifty-five feet in length.

**Boulder Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, July 29, 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president and treasurer Edwin Lord; secretary, Geo. H. Morrison; offices 19 Nassau street, New York, and at Boulder; owns the Boulder County and Trojan lodes, 1400x50 feet each, and Western Extension, Conger, Walden, Hamlin, and Pendleton lodes, 1500x50 feet each, situated at Cardinal, in Grand Island Mining district; also 700 acres of mineral land and two placer claims, ten and thirty-two and six-tenths acres, respectively; all patented, excepting the Walden, Hamlin, and Pendleton, and the placer claims; veins all fissures, from four to six feet in width, of galena, iron, and copper pyrites, in a quartz gangue; assays from one-half to four ounces of gold and from five to sixty ounces of silver per ton; developed by 900 feet of tunneling and shafting; also owns stamp and concentrating mill, situated at Nederland, containing twenty-five stamps and operated by water-power; capacity for treating twenty-five tons of ore per day; built by Fraser & Chalmers, of Chicago, Illinois.

**Boulder County.**—Owners George H. Morrison and Irving A. Evans, both New York City; office 19 Nassau street, New York City; claim 1400x50 feet; situated on Gold Mountain, Grand Island Mining district, twenty-three miles from Boulder; located 1870, and patented; vein a fissure six feet wide, and pay streak from two to twenty-three inches of galena in a quartz gangue, which mills from $10 to $100 silver per ton; developed by tunnel 700 feet in length, shaft of 200 feet in depth, and 1,000 feet of levels; output $13,000.

**Boulder Valley Consolidation Mining Company (The).**—Owns the Boulder Valley and Golden Key, 1500x150 feet each; situated one-half mile south-west of Sunshine; located 1880; veins both fissures, from four to eight feet in width, and pay streak from two to six inches of quartz, tellurium and free gold, which assays from $50 to $800 per ton; developed by four shafts, varying from twenty to eighty-five feet in depth.

**Broker's Vault.**—Owners J. J. Cullacott and R. A. Bigger, both Salina, Colo.; claim 1500x150 feet; situated on Melvina Hill, Gold Hill Mining district, nine miles from Boulder; located 1878; vein, a fissure, two feet wide; pay streak five inches of quartz carring tellurium, which assays from $50 to $500 per ton; developed by shaft thirty-five feet in depth and open cut fifty feet in length.

**Brunswick.**—Owned by Chas. S. Schilling; claim 1500x150 feet; situated at Providence, near Jamestown, in Central Mining district; vein a fissure, varying in width from four to ten feet, and containing two pay streaks, one on the foot wall six inches wide, the other on the hanging wall three inches in width; shipments of sorted ore have been made which gave returns of 50 ounces gold and 125 ounces silver per ton, while the second-class gave returns for fifteen



ounces gold and twenty ounces silver per ton, and the third-class two ounces gold and five ounces silver per ton; the character of the ore is quartz carrying tellurium with rusty gold; developed by two shafts ten and twenty feet in depth, respectively.

**Buckeye.**—Owners, Dixon Bros., Boulder, Colo.; claim 1500x150 feet; situated one mile north of Sugar Loaf Mountain, Sugar Loaf Mining district, eleven miles from Boulder; located 1881; vein a fissure, containing pay streak from five to ten inches in width; ore—galena, gray copper, and quartz; assays 100 ounces silver per ton; developed by shaft fifty-two feet in depth.

**Buckeye and Morning-glory.**—Owner W. T. Turner, Jamestown, Colo.; claims 1500x150 feet each; situated in Central Mining district, fifteen miles from Boulder; located March, 1882; vein a fissure six feet wide, pay streak from three to ten inches of quartz carrying free gold, which assays from $15 to $400 per ton; developed by shafts twenty-two and forty-two feet in depth, respectively.

**Buena Gold Mining Company (The).**—Incorporated under the laws of Colorado, capital stock $600,000 in 60,000 shares of $10 each; president, Thomas H. Gill; secretary, H. E. Eggleson; treasurer, D. R. Patterson—all Philadelphia, Pa.; superintendent, H. A. Haskin, Jamestown, Colo.; offices 312 Stock Exchange Place, Philadelphia, and Jamestown, Colo.; owns the Buena lode, 1500x150 feet; situated on Buena Hill, one-half mile from Jamestown, and fifteen miles from Boulder; vein a fissure two feet wide, pay streak from four to twelve inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, $200 per ton; developed by shaft 112 feet in depth, and two other shafts aggregating 120 feet; also tunnel 307 feet in length; output for 1881 and 1882 $2,500. Also owns a mill situated in Jamestown; building 70x20 feet, containing a Forester Crusher, Rolls, and Roaster, and has capacity for treating six tons of ore per day; run by water-power.

**Buenos Ayres.**—Owned by John M. Williams & Co., Jamestown, Colo.; claim 1500x150 feet; situated near Jamestown, in Central Mining district; located in 1873; vein a fissure between granite walls, three feet wide; pay streak fourteen inches; character of ore, fluor-spar impregnated with iron pyrites, galena, and copper, and has an average value of from $25 to $100 per ton, while selected pieces will run higher; developments, a main shaft seventy-five feet in depth, with a cross-cut tunnel which is now in some seventy-five feet, which is designed to cut the vein 100 feet in depth.

**Burleigh.**—Clement C. and F. B. Eddy and Mrs. J. J. Jones, Salina, Colo., owners; claim 1500x150 feet; situated on Melvina Hill, Gold Hill Mining district, nine miles from Boulder; located 1875; fissure vein, with crevice of four feet, and pay streak of eight inches of quartz carrying tellurium, which assays from $400 to $500 per ton; developed by shaft 160 feet in depth, and levels sixty feet in length.

**California.**—F. A. Squires, Boulder, Colo., owner; claim 1500x150 feet; situated one mile from Ward, in Ward Mining district; patented; fissure vein of quartz carrying free gold, out of which has been taken $10,000 worth of ore; developed by shaft 170 feet in depth.

**Canadian.**—Rufus Gray, Wm. Todd, John Thomas, Wm. Harris, and Robert Brown, all Caribou, Colo., owners; claim 1500x150 feet; situated on Bald Mountain, Grand Island Mining district, two miles from Caribou; located 1882; fissure vein, with crevice of three feet, and pay streak from two to six inches of galena in a quartz gangue, which assays from 100 ounces to 500 ounces silver per ton; developed by shaft twenty feet in depth.

**Caribou Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, with capital stock, $1,500,000, in 150,000 shares of $10 each; president, R. G. Dun; treasurer, J. T. Graham—both New York City; superintendent, W. E. Harris, Nederland, Colo.; offices, No. 18 Wall street, New York City, and Nederland, Colo.; owns the following lodes, viz.: Caribou, 1500x50 feet, and the No Name, Spencer, and Columbia, 1400x50 feet each; situated on the north slope of Caribou Hill, Grand Island Mining district, twenty-two miles from Boulder; located 1869 and 1870; patented; the veins are fissures, ranging from two to ten feet in width, those in the two first named claims crossing each other, containing a vein matter of quartz, and an ore of zinc blende, galena, iron and copper pyrites, interspersed with a considerable percentage of silver glance and native silver; the solid, or smelting, ore yeilding, when sorted, from 50 to 1,000 ounces silver per ton, and the milling material from 20 to 50 ounces. Caribou is developed by main shaft 1,010 feet in depth, and shaft east of main shaft 600 feet in depth, other shafts aggregating 500 feet, also by a tunnel 600 feet in length, which intersects the vein at a depth of 816 feet, levels aggregating 6,400 feet, and winzes 900; the No Name is developed by a shaft 600 feet in depth connecting with levels in the Caribou, and is worked through them; Spencer, by shaft 420 feet in depth, and 1,500 feet of levels; equipped with six-air drills, and engine 100 horse power; there is also an engine of twenty-horse power in the Spencer lode; the group has produced $2,500,000, and present out-put is ten tons of ore per day. Also owns a stamp-mill situated at the town of Nederland; main building 165x100 feet, and contains fifteen Stamps, Blake Crusher, four cylinders; operated by engine 100-horse power in winter, and by water-power in summer, and has capacity for treating twelve tons of ore per day.

**Castle View Group.**—Owners Thos. R. Green and A. D. Tankersly, both Springdale, Colo.; group comprises six claims; situated in Ellen Hill Central Mining district, thirteen miles from Boulder; located 1882; veins all fissure, from five to fifteen feet in width, with pay streaks from five to twenty inches of quartz and tellurium with iron pyrites, which assays from one-half ounce to twenty ounces of gold per ton; developed by tunnel fifty feet in length, and shaft forty feet in depth.

**Cayugua Chief.**—W. E. Roe, W. F. Keifer both Gold Hill, Colo., and A. C. Strock, Sunshine, Colo., owners; claim 1500x150 feet; situate on Left-Hand Creek, two miles from Gold Hill, Gold Hill Mining district; located 1875; a fissure vein five feet wide, and pay streak from four to twelve inches of tellurium and gold quartz, which mill-runs, when sorted, $50 per ton; developed by tunnel ninety feet in length, and shaft twenty feet in depth.

**Celestial.**—Anthony E. Arnett, Boulder, Colo., owner; claim 1500x150 feet; situated in Ward Mining district, three-fourths of a mile from Ward, and patented; vein a fissure, with crevice from eight to twenty inches wide; pay streak from one to four inches of quartz carrying free gold, which mill-runs $125 per ton; developed by shaft 100 feet in depth; equipped with engine fifteen-horse power; output $10,000.

**Central City Group.**—H. M. Teller, Willard Teller, both Denver, and Stephen Santerd, Caribou, Colo., owners; group embraces four claims 1500x150 feet each; situate on Idaho Hill, one-fourth of a mile from Caribou, and patented; veins all fissures, from one to seven feet in width, containing quartz carrying galena and silver glance, which assays from 10 to 200 ounces of silver per ton; developed by shaft 115 feet in depth.

**Central Gulch Ditch & Mining Company (The).**—Incorporated under the laws of Colorado, April 22, 1882: capital stock $1,000,000, in 100,000 shares of $10 each; president, A. B. Ingols; secretary and treasurer, J. W. Barbee; superintendent, Col. G. W. Cummings—all Denver; office 344 Sixteenth street, Denver, Colo.; owns eleven gold placer claims o twenty acres each; situate in Central Gulch, Central Mining district, two miles from Jamestown.



**Century Mining and Smelting Company (The).**—Incorporated under the laws of New York; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, John H. Wood, New York City; secretary and treasurer, B. F. Wood, New York City; general manager, Geo. G. Philip; superintendent, Thomas L. Wood; office Sunshine, Colo.; owns the following lodes, viz.: Comanche, Williams, Washington, White, Victoria, and three others, 1500x150 feet each; situated in Albion Camp, Grand Island Mining district, four miles from Caribou; located 1876; vein a fissure, with crevice from two to four feet of quartz and galena, which assay from 50 to 300 ounces silver per ton; developed by tunnel 300 feet in length and shaft 60 feet in depth.

Also owns the Atchison Group, comprising the following lodes, viz.: Atchison, Mountain View, Mountain Chief, and Bluebell, 1500x150 feet each; situated in Gold Hill Mining district; veins all fissures, with crevices ranging from three to six feet, and pay streaks from one inch to ten inches of tellurium and quartz; developed by shafts aggregating 1500 feet.

Also owns the Comanche, 1500x150 feet; located in 1866; situated on North Boulder Creek, Albion Mining district, six miles from Nederland and twenty-three miles from Boulder; vein a fissure, average width forty feet; nature of ore, galena and carbonate of copper; average value, twenty ounces silver per ton; developments, main shaft forty feet deep.

Also owns a concentration-works, situated in Camp Albion, four miles from Caribou; capacity for concentrating seventy-five tons of ore per day.

Also owns a stamp-mill, smelting and concentration works; situated at the junction of Gold Run and Four Mile Creek, on the railway line, with a capacity for treating forty tons of ore per day.

**Champion.**—T. J. and J. F. Murray, both Salina, Colo., owners; claim 1500x150 feet; situated on Big Horn Mountain, Gold Hill Mining district, ten miles from Boulder; located in 1877; vein a fissure, with a crevice of four feet, and pay streak from three to fifteen inches of gray copper and galena in a quartz gangue, which assays from 50 to 400 ounces silver per ton; developed by shaft thirty feet in depth and levels aggregating sixty feet.

**Charter Oak Group.**—William Rheason, Jamestown, owner; group comprises five claims, 1500x150 feet each; situated on Longfellow Mountain, Central Mining district, two miles from Jamestown; located 1879; veins all fissures, with crevices from two to three feet, and pay streaks from four inches to sixteen inches of free gold, copper pyrites, and native copper in quartz, which mill-runs, when sorted, $40 per ton; developed by shafts aggregating 200 feet, and tunnels aggregating 200 feet.

**Chatham.**—1500x150 feet; situated in Ward district, six miles from Jamestown; relocated January 1, 1882; owners Geo. M. McAdams and A. L. Jessup, both Denver, and Jno. Rice, Ward; vein a fissure two feet wide, pay streak ten to fourteen inches of iron pyrites in a quartz gangue, on which two small mill-runs of sorted ore went $40 and $60 per ton, respectively; developments, two shafts seventy and thirty feet deep, respectively, with 125 feet of drifting from the former.

**Chicago & Colorado Mining Company (The).**—Incorporated April 26, 1876; capital stock $250,000, in 25,000 shares of $10, non-assessable; superintendent, Wesley Brainard; office Boulder, Colo.; owns forty lode claims and eight tunnel sites; situated in Camp Telcott; veins all fissures, with crevices ranging from three to five feet in width, of quartz carrying gold

and silver, which assay from $20 to $50 in gold, and from 100 to 300 ounces of silver per ton; developments consist of tunnels and shafts varying from 10 to 1,000 feet in depth; also owns a stamp-mill, situated at Camp Telcott, containing twenty Stamps, run by a forty-two horse-power turbine water-wheel, and ten-horse-power engine.

**Chingiskhan.**—A. J. Osborn, S. A. Griffin, C. W. Rowland, and Wm. Church & Co., all Boulder, owners; claim 1500x150 feet; situated on Gold Cliff Mountain, Boulder Mining district, three and one-half miles from Boulder, Colo.; located 1875; vein a fissure three feet in width, pay streak ten inches of quartz carrying tellurium, which mill-runs, when sorted, from $50 to $500 per ton; developed by shaft sixty feet in depth and open cuts aggregating 150 feet; aggregate output $2,000.

**Climax Group.**—Wm. Boyce, Gold Hill, Colo., owner; group comprises three claims, 1,500x150 feet each; situated on north side of Left-Hand Creek, Central Mining district, ten miles from Boulder; located 1883; veins all fissures, from two to four feet in width, with pay streaks from five to twenty inches of quartz, tellurium and galena, which assays from $50 to $100 per ton; developed by three shafts ten feet in depth each.

**Clipper Nos. 1 and 2 and Golden Gem.**—George Hansbrough & Sons, Boulder, Colo., owners; claims 1500x150 feet each; situate at head of Sunbeam Gulch, Sugar Loaf Mining district, seven miles from Boulder and patented; veins all fissures from two to three feet in width, pay streaks from one to sixteen inches of quartz, tellurium and free gold, and some gray copper, which assay from $100 to $500 per ton; developed by shaft forty feet in depth and tunnel seventy-five feet in length.

**Coercion.**—(See Yellow Pine).

**Cohen.**—Owners Daniel Cohen, Geo. and M. Holstein, and M. Harris, all of Boulder, Colo.; claim 1500x150 feet; situate on Gold Hill, Gold Hill Mining district; located 1876, and patented; vein a fissure, from two to five feet wide; pay streak from two to five inches of quartz, tellurium and free gold, which assay from $150 to $300 per ton; developed by shafts thirty-eight, and seventy-three feet in depth, respectively.

**Colfax Group.**—M. I. B. Gillette and J. M. Freeman, both Greeley, owners; group comprises three claims 1500x150 feet each; situated on Longfellow Hill, Central Mining district, two and one-half miles from Jamestown; located 1876; veins all contacts, from three to ten feet wide, pay streaks from two to eight inches of iron and copper pyrites, and galena, in a quartz gangue, which mill-runs, when sorted, $40 per ton; developed by two shafts forty and eighty-five feet in depth, respectively, and levels aggregating 170 feet; also own the Colfax mill of ten Stamps and Concentrators.

**Comforter.**—H. E. Washburn and W. F. Rowan, both Boulder, owners; claim 1500x150 feet; situated between north and middle Boulder Creeks, ten miles from Boulder; located 1879; vein a fissure thirty inches wide, pay streak from two to five inches of quartz carrying tellurium and free gold, which assay $100 per ton; developed by shaft thirty-two feet in depth.

**Comstock No. 2 Group.**—N. C. Peterson, Sunshine, Colo., and H. J. Van Wetering, Denver, Colo., owners; group comprises three claims, 1500x150 feet each; situated on Lee Hill, one and one-half miles north of Sunshine, and seven miles from Boulder; located 1875, and patented; veins all fissures, from one to six feet wide, pay streaks from three to six inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, from



$100 to $700 per ton; developed by shafts aggregating 160 feet and two tunnels 100 and 130 feet in length, respectively.

**Conger.**—Ulysses Pugh, Caribou, owner; claim 750x50 feet; located 1864; situated on Caribou Hill, Grand Island Mining district, twenty-three miles from Boulder; vein a vertical fissure two feet wide; nature of ore, galena, iron and copper pyrites in a quartz gangue; average value, when sorted, $75 per ton; developments one main shaft forty feet deep.

**Connors.**—Timothy P. Connor & Co., Central City, Colo., owners; claim 1500x150 feet; situated in Magnolia Mining district, three-fourths of a mile from Magnolia; located 1882; vein a fissure two feet wide; nature of ore, quartz carrying silver and gold, which assays $50 per ton; developed by shaft fifteen feet in depth.

**Connors and Governor Pitkin.**—Mel. Marston & Co., Magnolia, Colo., owners; claims 1500x150 feet each; situated at Magnolia, in Magnolia Mining district; located 1882; veins all fissures, from one to six feet in width, pay streaks from two to ten inches of tellurium and gray copper in quartz, which assay $100 per ton; developed by three shafts fifteen, twenty, and twenty-five feet in depth, respectively.

**Corinne.**—M. N. Steele and Jesse P. Eddridge, Jamestown, Colo. owners; claim 1500x150 feet; situated on Golden Age Hill, Central Mining district, eighteen miles from Boulder; located 1882; vein a fissure four feet wide, pay streak from three to seven inches of quartz carrying free gold; developed by incline shaft thirty feet in length.

**Corning Tunnel.**—John A. Ellet, Boulder, Colo., owner; site 3,000 feet in length; situated on Gold Hill, Gold Hill Mining district, and has been developed for a distance of 1,100 feet, during the progress of which eight lodes have been opened up, which as yet remain undeveloped.

**Crater.**—A. J. Waggoner and U. Miels, both Magnolia, owners; claim 1500x150 feet; situated in Waggoner Camp, Magnolia Mining district, one and one-half miles from Magnolia; located 1879; vein a fissure four feet in width, with a pay streak from five to twenty inches of ruby and native silver and silver glance in quartz, which assays from 50 ounces to 400 ounces silver per ton; also free gold and tellurium, on which assays have been obtained as high as fifteen ounces gold per ton; developed by two shafts twenty and eighty-five feet in depth, respectively, and open cut sixty feet in length.

**Crisman Concentration Works**—Henry Neikirk, Boulder, owner; works situated at Crisman, six miles from Boulder; main building 24x16 feet, containing ten Stamps and four Frue Vanners, driven by an engine twenty-five-horse-power; capacity twelve tons per day (twenty-four hours).

**Crocker Process Ore Reducing Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 10,000 shares of $100 each; president, Henry Killum, New Haven, Conn.; secretary and treasurer, Theodore I. Pease, Thompsonville, Conn.; superintendent, W. H. Crocker, Jamestown, Colo.; works situated at Jamestown, containing Ball Pulverizer and Blake Crusher; and the ore is treated by hot amalgam, etc., in closed retorts for desulphuration; the process being concentration and desulphuration, by which from eighty to ninety per cent of gold can be obtained from the tellurium ore; capacity fifteen tons of ore per day; also owns the Bonanza Nos. 1, 2, 3, and 4, 1500x150 feet each, adjoining the mill; the veins being fissures, with pay streaks varying from ten to thirty inches in

width, of low-grade galena and iron pyrites; developed by shaft twenty-five feet in depth.

**Croesus.**—W. J. Williams, M. J. Cummerford, L. W. Hayhurst, and George Seal, all Boulder, Colo., owners; claim 1180x150 feet; situated in Sugar Loaf Mining district, six miles from Boulder; located 1875, and patented; vein a fissure from one to five feet wide, pay streak from five to ten inches of gold-bearing quartz, which assays from five to eleven ounces gold per ton; developed by tunnel 106 feet in length.

**Cumberland.**—C. S. Stowell and A. Middleton, both Magnolia, Colo., owners; claim 1500x150 feet; situated on the Cumberland vein, a fissure forty feet in width, and taken up for a distance of two and one-half miles; the Eclipse, Telephone, India Rock, and Mount Mammoth being some of the claims located thereon, and all sufficiently developed to prove the strength and continuity of the vein, besides several others as yet undeveloped; all in Magnolia Mining district; the vein contains gold-bearing quartz which mill-runs from $50 to $100 per ton; developed by a tunnel on the vein eighty feet in length.

**Cupel.**—H. R. Jones and others, Boulder, Colo., owners; claim 1500x150 feet; situated one mile from Sugar Loaf Mountain, Sugar Loaf Mining district, eleven miles from Boulder; located 1875; vein a fissure four feet wide, pay streak from three to twelve inches of quartz, carrying tellurium which assays $120 per ton; developed by tunnel forty-five feet in length.

**Daisy.**—Richard Liner, Magnolia, Colo., owner; claim 1500x150 feet; situated two and one-half miles from Nederland, Grand Island mining district; located 1882; vein a fissure one foot wide, pay streak from three to six inches of gold bearing quartz, which assays from five to ten ounces gold per ton; developed by shaft twenty feet in depth.

**Dass.**—Frank Blake, Boulder, Colo., and others, owners; claim 1500x150 feet, situated on Melvina Hill, Sugar Loaf Mining district, eight miles from Boulder; located 1879; vein a fissure three feet wide, pay streak from three to fifteen inches of quartz, carrying tellurium and free gold, which assays from $50 to $200 per ton; developed by two shafts 70 and 175 feet in depth, respectively, and drifts 100 feet in length.

**December Mining and Milling Company (The),** *Limited.*—President, Samuel S. Griffitts; treasurer, W. H. Johnstone—both Philadelphia, Pa.; manager, George W. Bratton; office Philadelphia, Pa; owns the December lode, 1500x150 feet; situated on Golden Age Hill, Central Mining district; located in 1875; vein a fissure, about five feet wide the developments consisting of one level 100 feet long, showing a strong body of galena ore interspersed with the rich free gold streak; the pay vein is well defined, one shaft reaching a depth of fifty feet, and in which the free-gold quartz is strong, the richest selected specimens assaying over $100,000 per ton, the lower-grade ore milling on an average $77.60 per ton; the galena streak is some two feet in width, assaying twenty-five per cent lead and seventy-one ounces in silver per ton; and another shaft is twenty-five feet in depth showing an average body of quartz as in the other workings; and a tunnel site has recently been located in Castle Gulch for the purpose of driving a tunnel to cut the vein at a depth of 500 feet.

**Denver Boy and Canton.**—G. H. and W. N. Thompson and others Gold Hill, Colo., owners; claims 1500x150 feet each; situated north side of, Gold Hill, Gold Hill Mining district, nine miles from Boulder; located 1876; the veins are fissures three and five feet in width, respectively, pay streak



from five to sixteen inches of quartz, carrying tellurium and free gold which mill-runs, when sorted, $30 per ton; developed by two adits forty-five and seventy-five feet in length, respectively.

**Dime.**—Owned by B. F. Smith, Denver, Colo.; claim 1500x150 feet; situated on the north slope of Yellow Pine Mountain, in Sugar Loaf Mining district; vein a fissure four feet wide, and pay streak varying from two to ten inches of quartz, carrying tellurium and free gold, with occasional pocket of rich tellurium, on which assays have been obtained as high as $1,000 per ton; developed by tunnel 300 feet in length and shaft forty feet in depth.

**Earl.**—B. D. Moffitt, A. R. Golden, and M. A. Bagley, all Springdale, Colo., owners; claim 1500x150 feet, situated on Big Blossom Hill, one and one-fourth miles from Springdale and thirteen miles north-west from Boulder; located 1879; vein a fissure eight feet wide, with three pay streaks of two inches each, and one of six inches wide of tellurium, in pockets and gold quartz, which, when sorted, mill-runs from $25 to $10,000 per ton; developed by shaft sixty feet in depth and level forty feet in length.

**Eclipse and Potosi.**—Arthur Middleton, F. Sherwood, George Seal, and M. J. Cummerford, all Magnolia, Colo., owners; Eclipse 1500x150 feet, Potosi 1500x125 feet; both situated on Magnolia Mountain, Magnolia Mining district; located 1881; veins both fissures, probably forty feet in width, pay streaks from one to ten inches of gold quartz, which assays from $25 to $100 per ton; developed by shafts aggregating 100 feet and tunnel fifty feet in length.

**El Dorado.**—W. H Nicholson and J. Geyer, both Sunshine, Colo., owners; claim 1500x150 feet; situated on Sunshine Hill, Gold Hill Mining district, seven miles from Boulder; located 1879; vein a fissure, from four to twenty feet in width, pay streak ten inches of quartz carrying tellurium and free gold, which assays from $25 to $4,000 in gold per ton; developed by shaft 100 feet in depth and 200 feet of drifting.

**Elk Horn.**—B. B. Page, L. Alkire, J. D. Alkire, and D. T. Sanderson, Denver, Colo., owners; claim 1500x150 feet; situated one-half mile north-west of Jamestown, Central Mining district; located 1882; vein a contact four feet wide, containing quartz galena and iron pyrites, which assays twenty per cent. lead, forty-two ounces silver, one-half ounce gold per ton; developed by shaft thirty feet in depth.

**Ellen.**—F. L. Higby & Co., Longmont, Colo., owners; claim 1500x135 feet; situated on James Creek, at Springdale, in Central Mining district; located 1875, and patented; vein a fissure five feet wide, with a pay streak from six to thirty inches in width, containing gold quartz and pockets of tellurium very rich in gold; while some of the ore runs up into thousands of dollars, a fair average, after sorting, is $200 per ton; developed by three shafts, 30, 70, and 100 feet in depth, with levels intersecting; the vein has also been exposed on the surface for 200 feet; output $8,000.

**Ellet Mill.**—John A. Ellet, Boulder, Colo., owner; contains twenty Stamps; capacity twenty tons of ore per day (twenty-four hours).

**Ellingham Mill.**—G. E. Binford, Denver, Colo., owner; mill is situated at Ward, contains ten Stamps, and has a capacity for treating ten tons of ore per day (twenty-four hours).

**Emancipation.**—C. C. Enright & Co., Sunshine, Colo., owners; claim 1500x150 feet; situated at Sunshine, Gold Hill Mining district, six miles

from Boulder; located 1877, and patented; vein a fissure three feet in width, pay streak from one-half to ten inches of quartz, carrying tellurium and free gold, which mill-runs from $50 to $350 per ton; developed by two shafts 55 and 280 feet in depth, respectively, and drifts aggregating 400 feet, worked by a fifteen-horse-power engine; output $75,000.

**Emerson Mining Company (The).**—Incorporated under the laws of New York; capital stock $250,00, in 25,000 shares of $10 each, non-assessable; president, Ira D. Bixby, Kalamazoo, Michigan; offices Kalamazoo, Michigan, and Boulder, Colo.; owns the Emerson lode, 1500x150 feet; situated on Woods Mountain, Sugar Loaf Mining district; located 1879; vein a fissure from four to six feet wide, containing two pay streaks five and fifteen inches wide, respectively, of quartz, carrying tellurium and free gold, which assays from $50 to $1,000 per ton; developed by three shafts 30, 60, and 150 feet in depth, respectively, and tunnel 113 feet in length.

**Emma.**—J. W. and Thomas Irwin and Joseph George, all Caribou, Colo., owners; claim 1500x150 feet, situated on Caribou Hill, Grand Island Mining district, twenty-two miles from Boulder; located 1877; vein a fissure three feet wide, and pay streak from one to three inches of galena, sulphurets and gray copper in a quartz gangue, which assays 120 ounces silver per ton; developed by two shafts forty and fifty feet in depth, respectively.

**Emmet.**—F. Robidoux, Ward, Colo., owner; claim 1500x150 feet; situated on Bald Mountain, three miles west of Ward and twenty-three miles from Boulder; located 1881; vein a fissure, five feet of quartz, iron pyrites, and free gold, which assays an average of $30 per ton; developed by shaft forty feet in depth.

**Encounter Group.**—N. S. Steele, Jamestown, Colo., owner; group comprises the Encounter, Alice, Little Alice, Silver Shield, and two other claims, each 1500x150 feet, situated on Longfellow Hill, Central Mining district, two miles from Jamestown; located 1879; veins all fissures, ranging from three to five feet in width, pay streaks from three to fifteen inches of copper pyrites and native copper in a quartz gangue, which assays from $25 to $150 per ton; developed by shafts aggregating 165 feet and tunnel thirty feet in engtth.

**Eva**—(See Lizard.)

**Excelsior.**—O. Christopher, and Wm. Boice, both Gold Hill, Colo., owners; claim 1500x150 feet; situated on north side of Left Hand-Creek, one and one-half miles from Gold Hill, Central Mining district, twelve miles from Boulder; located 1882; vein a fissure four feet wide, pay streak from five to twenty inches of galena and silver glance in a quartz gangue, which assays $125 per ton; developed by shaft thirty-five feet in depth.

**Excelsior Mill.**—O. Christopher, Gold Hill, Colo., owner; mill is situated at Gold Hill, and contains eight Stamps run by water-power; capacity for treating six tons of ore per day.

**Exposition.**—T. F. Hendershot, Wm. Striker, and Roger Bane, Boulder and Osborn, Colo., owners; claim 1500x150 feet; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, ten miles from Boulder; located July, 1882; vein a fissure three feet wide, pay streak from five to ten inches of quartz carrying tellurium, which assays $40 per ton; developed by shaft thirty feet in depth.

**Extension.**—John A. Ellet, Boulder, and W. H. Cushman, George-



town, owners; claim 1500x150 feet; situated near Caribou, Grand Island Mining district, and patented; vein a fissure, containing quartz, galena, and gray copper, which assays from $50 to $300 per ton; developed by shaft sixty feet in depth.

**Fair Count.**—T. F. Hendershot and R. S. McClellan, Boulder and Osborn, Colo., owners; claim 1500x150 feet; situated on Mount Pisga, in Sugar Loaf Mining district, nine miles from Boulder; located 1880; vein a fissure four feet wide, pay streak from six to twelve inches of quartz carrying tellurium and free gold, which assays $100 per ton; developed by three shafts twelve, eighteen and twenty-five feet in depth.

**Fairbanks Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in October, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, H. Chas. Ulman; secretary, Fred. T. Baker; treasurer, A. J. Williams—all Denver; superintendent, Timothy O'Connor, Jamestown; office 284 Fifteenth street, Denver, and Jamestown, owns the Fairbanks group, eight claims, 1500x150 feet each, viz.: Little Jack, Old Tycoon, Fairbanks, Katie K, Clara Mack, Ellerton, St. John, and H. Charles; located in April, 1881; veins all fissures, from two to eight feet in width, with pay streaks from four to sixteen inches of quartz, carrying pockets of tellurium ore, on which assays have been obtained from $534 to $10,700 per ton, and mill-runs average $150 per ton, and in the Fairbanks lead carbonates and decomposed matter; developments—eight shafts, one on each claim, ranging from thirty to fifty feet in depth, and one tunnel on the Little Jack which crosses the other claims, now in 315 feet, and designed to cut the veins in all the other claims.

**Fox Coal Mine**—M. P. Fox, Denver and Langford, Colo., owner; claim embraces eighty acres of coal land, situated at Langford, five miles from Boulder, and contains a strata or vein of bituminous coal thirteen feet thick, and is developed by three entries 300, 450, and 1200 feet in length, respectively; yield for 1882, 30,000 tons of coal.

**Frankford and Gold Nugget.**—H. F. and H. A. Learnard, both Gold Hill, Colo., owners; claims 1500x150 feet each; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder; located 1876; veins both fissures, with crevices of four and six feet in width, and pay streaks from four to eight inches of quartz carrying tellurium and free gold, which assays from $20 to $100 per ton; developed by two adits 85 and 125 feet in length respectively.

**Franklin.**—J. T. Jones and T. Johnson, both Osborn, Colo., owners claim 1500x150 feet; situated on Sugar Loaf Mountain, Sugar Loaf Mining district; located 1879; vein a fissure, three feet wide, pay streak twelve inches of quartz carrying tellurium, free gold, and silver, which mill-runs when sorted, from $100 to $150 per ton; developed by two shafts thirty-three and eighty feet in depth, respectively.

**Garfield.**—Rufus Gray, E. W. Dickinson, and Samuel Richards, all Caribou, Colo., owners; claim 1500x150 feet; situated on Idaho Hill, Grand Island Mining district, near the town of Caribou; located 1880, and patented; vein a fissure four feet wide, pay streak fifteen inches of galena and sulphurets in a quartz gangue, which assays 140 ounces per ton; developed by shaft 95 feet in depth and levels aggregating 120 feet.

**Garibaldi.**—(See Union).

**Georgetown and Theodore.**—B. Von Trothen, Denver,

Colo., owner; claim 1500x150 feet; situated one mile from Sugar Loaf Mountain, Sugar Loaf Mining District, eight miles from Boulder; located 1876 and 1880, respectively; veins both fissures, with crevices ranging from three to five feet, and pay streaks from two to eight inches of quartz carrying tellurium and free gold; developed by shaft forty feet in depth.

**Giles Group.**—J. Giles, Ward, Colo., owner; group comprises three claims, 1500x150 feet each; situated one mile from Ward, nineteen miles from Boulder; veins all fissure, with crevices from two to four feet in width, and pay streaks from six to twelve inches of iron pyrites, carrying gold, in a quartz gangue, which mill-runs, when sorted, from a half ounce to three ounce gold per ton; developed by tunnel on the vein forty feet in length, and two shafts forty and sixty feet in depth, respectively.

**Gillespie.**—Gillespie Bros., Sunshine, Colo., owners; claim 1500x150 feet; situated one and one-fourth miles west of Sunshine, in Gold Hill Mining district; located 1874; vein a fissure three feet in width, average pay streak five inches of quartz, carrying tellurium and free gold, which mill-runs, when sorted, $25 per ton; developed by shaft forty feet in depth and tunnel on the vein fifty feet in length.

**Gladiator.**—Owned by Cyrus Taylor, Springdale, Colo.; claim 1500x150 feet; situated at Springdale, in Central Mining district; located 1875; vein a fissure, containing a pay streak of five inches of quartz rich in tellurium and free gold and twelve inches more of concentrating ore—the former of which mill-runs, when sorted, about $1,500 per ton, the latter from $15 to $50 per ton; developed by main shaft 110 feet in depth, another shaft forty feet in depth, with several open cuts on the surface exposing the vein; output over 100 tons of concentrating ore.

**Glide.**—W. N. Thompson and G. D. Kinnear, Gold Hill and Silver Cliff, Colo., owners; claim 1500x150 feet; situated on north slope of Gold Hill, Gold Hill Mining district, nine miles from Boulder; located 1875; the vein is a fissure, with a crevice of six feet, and a pay streak from two to twenty inches of quartz, carrying tellurium and free gold, which mill-runs, when sorted, from $15 to $40 per ton; developed by shaft forty-five feet in depth, tunnels aggregating 130 feet, and levels aggregating 200 feet; output fifty tons of ore.

**Gold Deposit Mining Company (The).**—President, Julius Hirshfield, Philadelphia, Pa.; superintendent, George DuBois; owns the Wonder lode, 1500x150 feet; situated on Golden Age Hill, Central Mining district; the vein is a fissure, containing pockets—varying from five to twenty inches in size—of quartz, carrying tellurium and free gold, which assays from $50 to $150 per ton; developed by shaft twenty-seven feet in depth and drift twenty-five feet in length.

**Gold Dust.**—H. F. and H. A. Learnard, Gold Hill, Colo., owners; claim 1500x150 feet; situated one-half mile from Rockville; located 1878; vein a fissure, with a crevice ten feet in width, and a pay streak of ten inches of galena and zinc in a quartz gangue, which assays from $20 to $50 per ton; developed by tunnel 180 feet in length.

**Gold Fin.**—John Shoemaker, S. Davidson, and F. R. Brown, Sunshine and Gold Hill, Colo., owners; claim 1500x150 feet; situated fourteen miles west of Boulder, Sugar Loaf Mining district; located 1881; the vein is a fissure, with a crevice four feet in width, and a pay streak from three to fifteen inches of quartz, carrying gold and iron pyrites, which assays from $20 to $100 per ton; developed by two tunnels on the vein fifty and seventy feet in length, respectively.



**Gold Medal.**—J. Langdell, Boulder Colo., owner; claim 1500x150 feet; situated on Gold Cliff Mountain, Boulder Mining district, four miles from Boulder, located in 1878; vein a fissure, with a crevice of five feet, and a pay streak from three to ten inches of quartz, carrying tellurium and free gold which assays from $100 to $1,200 per ton; developed by shaft 100 feet in depth and tunnel sixty feet in length.

**Gold Run Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, capital-stock $250,000, in 25,000 shares of $10 each, non-assessable; president, W. B. Stone, Galena, Kas.; vice-president, Howard Gove, Galena, Kas.; secretary, Walter Gove, New York City; superintendent, E. S. Gomer, Gold Hill, Colo.; office Gold Hill, Colo.; owns the Victoria lode, 1500x150 feet, situated on Gold Hill, Gold Hill Mining district, nine miles trom Boulder; vein a fissure, with a crevice of three feet, and a pay streak from two to twenty-four inches of quartz carrying pockets of tellurium ore, which mill-runs, when sorted, from $200 to $300 per ton; developed by four shafts, 35, 80, 125, and 250 feet in depth respectively, and levels aggregating 1,000 feet; worked by a thirty-five-horse-power engine; output $150,000.

**Golden Age Mining Company.**—Consists of Eugene S. Pike and Parnely Bros., all Chicago, and Daniel H. Pike, Jamestown, who is superintendent; owns the Golden Age, 1500x150 feet, situated on Golden Age Hill, two miles from Jamestown, in Central Mining district; located 1875; patented; the vein is a fissure, averaging four feet in width, somewhat pockety, but showing a streak of quartz carrying free metallic gold, which mill-runs from $10 to $30,000 per ton; there is also two feet of milling ore which runs $20 per ton; developed by main shaft 300 feet in depth, incline 260 feet in length, also a number of levels, winzes, and drifts, aggregating 2,000 feet; output $130,000; also owns the Golden Age Stamp-mill, situated at Jamestown, and containing twenty Stamps, with a capacity for treating twenty tons of ore per day.

**Golden Eagle Group.**—Joseph Lovett, Denver, Colo., and Irwin Bros., Boulder, Colo., owners; group comprises the Golden Eagle, Modoc, and Eastern Slope, 1500x150 feet; situated in Bummer Gulch, near Sugar Loaf Mountain, Sugar Loaf Mining district, nine miles from Boulder; veins are fissures, with crevices from three to ten feet in width, and pay streaks ranging from five to twelve inches of quartz, carrying pockets of tellurium ore and free gold, which assays an average of $100 per ton; developed by shaft 145 feet in depth, tunnel forty feet in length, and levels aggregating 110 feet.

**Golden Gem.**—(See Clipper Nos. 1 and 2.)

**Golden King Mining Company.**—Incorporated under the laws of Colorado; president, A. B. Ingols; secretary, D. T. Sanderson; treasurer, Samuel P. Barbee; all Denver, manager, H. H. Parmeter, Jamestown, Colo.; office 344 Sixteenth street, Denver, Colo.; owns Golden King Group, comprising the following lodes, viz.: Golden King, A. B. Ingols, Alkire, and New Discovery, 1500x150 feet each; situated on Golden Age Hill, Central Mining district, one-half mile from Jamestown; located 1882; the veins are all fissures, with crevices from two to twelve feet in width, and pay streaks from two to eight inches of quartz carrying free gold, on which assays have been obtained from two to twenty-eight ounces gold per ton; developed by shaft 103 feet in depth, and drifts aggregating 177 feet.

**Golden Rule Group.**—S. A. Elliott and M. Wilson, both Boulder, Colo., owners; group comprises the Golden Rule, Golden Cross, and Ready Cash lodes, 1500x150 feet each; situated at head of Sand Gulch, six miles from Boulder; located 1880; veins all fissures, with crevices from ten to twenty-four

inches in width, and pay streaks from one to five inches of quartz carrying tellurium, which assays from $150 to $200 per ton; developed by shaft sixty-five feet in depth, and tunnel fifty feet in length.

**Golden Slipper.**—Owned by Wm. H. Nicholson, Sunshine; F. Irving Davis, Somerville, Colo.; C. H. Davis, Concord, Mass.; and Frank Leach, Chelsea, Mass.; claim 1500x150 feet; situated at Somerville, and is an extension of the Morning-glory lode, with similar characteristics; (see Morning-glory); developed by tunnel 110 feet in length.

**Golden Smelting Company (The).**—(See Jefferson County) owns a branch sampling-works, situated at Boulder; main building 60x60 feet, containing four Improved Blake Crushers, two sets Cornish Rolls, one six-inch Crusher, motive power for which is supplied by a fifteen-horse-power engine; sampling capacity twenty tons of ore in ten hours.

**Goldsmith Maid.**—Henry Meyring, M. Kessler, C. G. Buckingham, and Joseph McPherson, Salina and Boulder, Colo., owners; claim 1500x150 feet; situated on Hoosier Mountain, at the town of Somerville, ten miles from Boulder; vein a fissure, with a a crevice eight feet in width, and pay streak from five to twenty inches of gray copper and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 ounces to 400 ounces silver per ton; developed by three shafts, 30, 40, and 118 feet in depth, respectively, and tunnel 100 feet in length; output $10,000.

**Governor Group Gold Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Crawford Spear; treasurer, Ed. Lafourcade; secretary, F. M. Croford—all Philadelphia, Pa.; superintendent, E. B. McDowell, Jamestown, Colo.; offices Philadelphia, Pa., and Jamestown, Colo.; owns the Governor, President, Charter, Denver View, Fanny H., Star of the North, Philadelphia, Jamestown, Annex, and Junction, 1500x150 feet each; situated between Jamestown and Gold Hill, in Central Mining district, five of which are patented; veins all fissures, with pay streaks ranging from ten to thirty inches, containing galena and iron pyrites in a quartz gangue carrying gold and silver which mill-runs, when sorted, from $20 to $40 per ton in gold and silver; developed by five shafts ranging from fifty to seventy-five feet in depth, and main tunnel 600 feet in length. Also owns a stamp-mill at Jamestown.

**Governor Pitkin.**—(See Connors.)

**Grand Central.**—J. M. Fox and S. W. and S. R. Cole, all Longmont, Colo., and J. W. Syabrandt, Springdale, Colo., owners; claim 1500x150 feet; situated in Castle Gulch, one mile north of Springdale and twelve miles north-west of Boulder; located 1875; vein a fissure, with crevice from six to fifty feet in width, and pay streak from four to twenty inches of quartz carrying tellurium, which mill-runs, when sorted, an average of $70 per ton; developed by tunnel 250 feet in length and openings on the surface of the lode for a distance of 1200 feet, also two shafts thirty and ninety feet in depth, respectively, the latter being from head of the tunnel; output $2,000.

**Grand Fern, White Chief, and Capt. Jack.**—H. Francis, Ward, Colo., owner; claims 1500x150 feet each; situated one-half mile from Ward, in Ward Mining district; located 1879, 1880, and 1882, respectively; veins all fissures, two and one-half feet wide, with pay streaks from four to sixteen inches of quartz and galena, which assays $80 per ton; developed by five shafts from thirty to forty-five feet in depth and tunnel thirty feet in length.

**Grand View Mining Company (The).**—Incorporated under the laws of Ohio; capital stock $52,000; president, J. H. Clemmer, Cincinnati; secretary and treasurer, W. P. Powell, Cincinnati; offices Cincinnati, Ohio, and Sunshine, Colo.; owns the Grand View lode, 1500x150 feet; situated at the town of Sunshine, Gold Hill Mining district; located 1874, and patented; vein a fissure, with a crevice of four feet, and a pay streak from four to twenty inches, principally of quartz carrying tellurium and free gold, which mill-runs, when sorted, from $100 to $1,000 per ton; developed by two shafts 60 and 390 feet in depth, respectively, and 600 feet of levels; output $75,000.



**Grange.**—F. A. Squires, Boulder, Colo., owner; claim 1400x50 feet; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder, and patented; vein a fissure, with a crevice from thirty to sixty inches, and a pay streak from four to thirty inches of quartz carrying free gold, which assays from $10 to $20 per ton; developed by shafts aggregating 160 feet, and tunnel 100 feet in length.

**Grant.**—L. R. Evans, Jamestown, Colo., owner; claim 1500x150 feet; situated one mile north-west of Jamestown and sixteen miles from Boulder; located 1882; vein a fissure, with a crevice from four to eight feet wide, and a pay streak from three to six inches of quartz carrying tellurium, which assays from two to twenty-five ounces gold per ton; developed by tunnel thirty feet in length and open cut ten feet in length.

**Grant County.**—William Donald, Frederick Kohn, and John Hite, all Caribou, Colo., owners; claim 1500x150 feet; situated on Caribou Hill, Grand Island Mining district, near the town of Caribou; located 1874 and is patented; a fissure vein, with a crevice of four feet, and a pay streak from one to six inches of galena and gray copper in a quartz gangue which assays from $100 to $400 per ton; developed by shaft fifty feet in depth.

**Graphic Extension.**—Guy Fairhurst, Magnolia, Colo., owner; claim 1500x150 feet; situated at Magnolia, in Magnolia Mining district; vein a fissure, with a crevice ranging from one to six feet in width, containing pockets of gold quartz, which assay from $25 to $100 per ton; developed by three shafts, ten, twenty, and fifty feet in depth, respectively.

**Gray Copper, Dunck, and Vancluer.**—G. R. Williamson, Boulder, Colo., owner; claims 1500x150 feet each; situated on Yellow Pine Mountain, Sugar Loaf Mining district, eight miles from Boulder, and patented; veins all fissures, with crevices from one to four feet, and pay streaks from one to six inches of gray copper in a quartz gangue, which assays from 50 to 500 ounces silver per ton; developed by winzes aggregating 250 feet, and tunnels aggregating, 1500 feet, of which 300 feet is on the Dunck.

**Gray Eagle.**—J. N. Gillespie and S. F. Huddleston, both Gold Hill, Colo., owners; claim 2000x50 feet; situated near Left-Hand Creek, in Gray Eagle Gulch, Gold Hill Mining district, ten miles north-west of Boulder, and patented; vein a fissure, with a crevice four feet wide, and a pay streak from four to six inches of quartz carrying pockets of tellurium, which mill-runs, when sorted, from $20 to $500 per ton; developed by two shafts fifty and eighty feet in depth, respectively, and 300 feet of levels.

**Gray Eagle Group.**—Berger Bros. & Co., Caribou, Colo., owners; group embraces the Gray Eagle, National Pride, and Independent lodes, 1500x150 feet each; situated on Caribou Hill, Grand Island Mining district, one-fourth mile from Caribou; veins all fissure, with crevices from three to six feet wide, and pay streaks from two to ten inches of gray copper and sulphuret in a quartz gangue, which assays from 50 to 100 ounces silver per ton; developed by tunnel 180 feet in length.

**Great Eastern.**—A. J. McCorkle, Jamestown, Colo., A. F. Rayford and J. C. Corter, both Denver, owners; claim 1500x150 feet; situated on Little Jim Creek, half mile from Jamestown, in Central Mining district; vein a fissure, with a crevice from four to eight feet in width, and a pay streak from four to twenty-four inches in width, containing galena in a quartz gangue, which mill-runs when sorted, from $20 to $70 per ton; developed by a tunnel on the vein sixty feet in length.

**Great Eastern.**—Joseph Colley, T. J. Murray, and others Sugar Loaf, Colo., owners; claim 1500x150 feet; situated on Melvina Hill, Gold Hill Mining district, ten miles from Boulder; located 1875; vein a fissure, with a crevice three feet wide, and a pay streak from one to six inches of quartz carrying tellurium, which mill-runs, when sorted, from $50 to $500 per ton; developed by shaft 222 feet in depth and two drifts ninety feet each in length; has produced $8,000.

**Green Leaf.**—Thomas K. Holden, Alexander McNeal, and Samuel Rener, all Jamestown, Colo., owners; claim 1500x150 feet; situated on Mount Lessig, Central Mining district, four miles from Jamestown; located 1881; vein a fissure, with a crevice ten inches wide of quartz carrying tellurium ore, which assays from three to nine ounces gold per ton; developed by tunnel thirty feet in length.

**Haskins.**—Cyrus Taylor and J. B. Tomlinson, Jr., Springdale, Colo., owners; claim 1500x150 feet; situated at head of Castle Gulch, near Golden Age mine, Central Mining district, twelve miles north-west of Boulder; vein a fissure, with crevice from three to six feet wide, and pay streak of six inches of iron pyrites in quartz, both carrying gold, which assays $50 per ton; developed by shafts aggregating fifty-six feet.

**Hastings Consolidated Tunnel Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, M. W. Wilcox; vice-president, C. M. Holbrook; secretary, J. H. Aller; treasurer and superintendent, A. S. Baldwin; office Sugar Loaf, Colo.; owns the Bullion, King Lear, Rocky Mountain, Omaha, and Little Pet lodes, 1500x150 feet each; situated on Sugar Loaf Mountain, Sugar Loaf Mining district; located from 1876 to 1879; veins all fissures, with crevices from one to four feet wide, and pay streaks from two to twelve inches of gold, bearing quartz, and adjoining which is a streak of iron and copper pyrites, in a quartz gangue; the former milling from $75 to $250, and the latter from $50 to $150 per ton, when sorted; the group will be developed by the Xerxes tunnel, some of the veins being cut at 300 feet in depth.

**Hidden Treasure.**—F. P. Rosengarten and L. R. Evans, both Jamestown, Colo., owners; claim 1500x150 feet; situated in Central Gulch, Central Mining district, fifteen miles from Boulder; located 1881; vein a fissure, with a crevice seven feet wide, and a pay streak from four to ten inches of quartz carrying free gold, which assays $80 per ton; developed by shaft forty feet in depth.

**Home Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $200,000, in 10,000 shares of $20 each, non-assessable; president, J. H. Claflin, New York City; vice-president, B. F. Smith; treasurer, W. B. Daniels—both Denver; secretary and superintendent. Fred Wilkins, Boulder, Colo.; offices Denver and Boulder, Colo.; owns the following lodes, viz: Leadville, Dime, Little Etta, and Shields, each 1500x150 feet; Dime and Shields patented; all situated on French Mountain, Sugar Loaf Mining district, seven miles from Boulder; veins all fissures, with crevices from ten to sixty inches wide, and pay streaks from two to eight inches of quartz, carrying tellurium and gray copper, which assays from $150 to $900 per ton; developed by tunnels aggregating 680 feet in length.



**Home, Sweet Home.**—F. D. Vane, Salina, Colo., owner; claim 1500x150 feet; situated in Home, Sweet Home Gulch, Gold Hill Mining district, one-half mile from Salina; located 1874; vein a fissure, with a crevice of six feet, and a pay streak from four to sixteen inches of quartz carrying tellurium, which assays from $25 to $200 per ton; developed by tunnel 450 feet in length.

**Homestake and Bunker Hill.**—S. A. Ellott, Crisman, Colo., owner; claim 1500x150 feet; situated at Crisman; located 1878 and 1880, respectively; veins both fissures, with crevices from one to six inches of quartz, carrying tellurium and grey copper, which mill-runs when sorted from two to six ounces gold per ton; developed by open cut and tunnel fifty feet long and a shaft thirty-five feet deep.

**Hoosier Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $50,000, in 5,000 shares of $10 each, non assessable; president, Henry Neikirk; secretary, S. A. Griffin; treasurer, A. J. Mackey; superintendent, David Evans; office Boulder; owns the Dana lode, 1500x150 feet; situated on Hoosier Mountain, Gold Hill Mining district, at town of Somerville; located 1867; vein a fissure, with a crevice twenty feet in width; vein matter quartz, containing pockets of grey copper and sulphurets; mill-runs, when sorted, $200 per ton; developed by two shafts, 50 and 140 feet in depth, respectively, and adit 600 feet in length; output $20,000.

**Horsefall Mining Company (The).**—Richard Crowe, Gold Hill, Colo., superintendent; owns three claims, 1500x150 feet each; situated on Gold Hill, Gold Hill Mining district, ten miles north-west of Boulder; located 1859; veins are fissures, with crevices from two to five feet in width, and pay streaks from two to twenty inches of quartz, carrying free gold and iron pyrites, which mills, when sorted, from $100 to $400 per ton; developed by shaft 345 feet in depth and levels aggregating 2,500 feet in length; worked by an engine thirty-horse-power; aggregate output about $400,000.

**Humboldt.**—B. Brown and Watson Bros., all Denver, Colo., owners; claim 1500x150 feet; situated near town of Rockville, in Central Mining district, nine miles from Boulder; located 1876; vein a fissure five feet in width, pay streak from four to ten inches of quartz, carrying tellurium and free gold, which mill-runs $20 per ton; developed by tunnels aggregating 200 feet in length.

**Humboldt Group.**—Owned by G. E. Binford, Denver, Colo.; group comprises three claims, 1500x150 feet each; situated one-half mile north of Ward, in Ward Mining district, twenty miles from Boulder, Colo.; vein a fissure, four feet in width, with a vein matter of quartz and an ore of galena and iron pyrites in a quartz gangue, which mill-runs when sorted, from $20 to $50 per ton; developed by shaft 200 feet in depth and levels aggregating 200 feet; operated by a fifteen-horse-power engine.

**Idaho.**—W. Martin, Georgetown; Samuel Mischler, Dillon; H. M. Camman, John and Annie Simmons, Caribou, Colo., owners; claim 1500x150 feet; situated on Idaho Hill, near the town of Caribou; located 1870; vein a fissure, with a crevice of twenty feet, the vein matter being quartz carrying a galena and sulphuret ore, which mill-runs, when sorted, from $50 to $500 per ton; developed by shaft 180 feet in depth; aggregate output about $7,000.

**Idaho, Sheridan, and Colorado.**—M. Mooney, and others,

Ward, Colo., owners; claims 1500x150 feet each; situated one-fourth mile from the town of Ward, in Ward Mining district; located 1879; veins all fissures from two to three feet in width, pay streaks from two to twenty-four inches of quartz, galena, and iron pyrites, carrying gold and silver; assays an average of $40 per ton; developed by five shafts ranging from twenty to fifty feet in depth and tunnel twenty-five feet in length.

**Illinois and Colorado Mining Company (The).**—Incorporated under the laws of Illinois, in June, 1877; capital stock $750,000, in 7500 shares of $100 each, non-assessable; president, John Gardner; secretary and treasurer, B. F. Bushy—both Jacksonville, Ill.; agent, James Meborth, Boulder, Colo.; offices Jacksonville, Ill., and Boulder, Colo.; owns the Centennial lode, situated in Pennsylvania Gulch, Sugar Loaf Mining district; located 1877, and patented; vein a fissure, containing gold-bearing quartz and copper pyrites which mill-runs, when sorted, from $50 to $100 per ton.

**India.**—Francis B. Beaumont, Boston, Mass., owner; claim 1500x150 feet; situated in Wagoner Camp, Magnolia Mining district, one and one-half miles from Magnolia; located 1875; vein a fissure, with a crevice of forty feet, and a pay streak from two to twenty inches of gold-bearing quartz, which assays from $200 to $500 per ton; developed by shaft sixty feet in depth.

**Ingram.**—C. G. Buckingham, Hiram Fuller, and Thomas Shires, Boulder and Salina, Colo., owners; claim 1400x50 feet; situated two miles from Gold Hill, Gold Hill Mining district; located 1867; patented 1876; vein a fissure, with a crevice four feet wide, and a pay streak from four to sixteen inches of quartz, carrying tellurium sometimes in the form of sylvanite in both pockets and in a defined streak, which mills, when sorted, from $50 to $500 per ton; developed by three adits, 20, 220, and 360 feet in length, respectively, and shafts aggregating 176 feet.

**Inter-Ocean.**—1500x150 feet; situated at town of Sunshine, Gold Hill Mining district, seven miles from Boulder; located 1876, and patented; vein a fissure, with a crevice seven feet wide, and a pay streak from two to ten inches of quartz, carrying tellurium and free gold, which mill-runs, when sorted, an average of $150 per ton; developed by shaft 135 feet in depth, and levels aggregating 180 feet; output $50,000.

**Invincible Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, R. R. Newkirk; secretary, M. S. Hasil; treasurer, A. H. Russell; general manager and vice-president, D. Downie—all Denver, Colo.; owns the INVINCIBLE lode, 1500x150 feet; situated one-half mile northwest of Jamestown, in Central Mining district; vein a fissure, with a crevice eight feet in width, and a paystreak varying from four to twenty inches of quartz, carrying pockets containing tellurium and free gold, sulphurets, galena, and gray copper, on which assays have been obtained as high as $2,000 per ton, and probably averaging $125 per ton; developed by shaft 105 feet in depth, and two levels twenty and forty feet in length, respectively, exposing the vein for a distance of 800 feet.

**Iron Queen.**—Owned by B. G. Strock and Wilson G. Clark, both Jamestown, Colo.; claim 1500x150 feet; situated north of and near Jamestown, in Central Mining district; developments consisting of a number of open cuts exposing a solid vein of hematite iron, carrying about five ounces silver per ton.

**Jamestown Milling and Tunnel Company (The).**—Incorporated under the laws of Colorado, January 3, 1883; capital stock



$1,000,000, in 100,000 shares of $10 each; president, J. D. Alkire; vice-president, Samuel R. Barbee; secretary and treasurer, D. S. Sanderson—all Denver; superintendent, A. J. McCorkle, Jamestown, Colo.; offices Denver, 372 Lawrence street, and Jamestown, Colo.; owns the S. B. lode, 1500x150 feet, and a tunnel site 3000x6 feet; situated on Golden Age Hill, Central Mining district, one-half mile from Jamestown; vein a fissure four feet in width, and pay streak twenty-eight inches of quartz carrying free gold, which mill-runs, when sorted, $40 per ton; developed by shaft sixty feet in depth; and it will also be intersected by the Jamestown tunnel, which is 125 feet in length at the present time.

**John Jay.**—Owned by A. J. Van Deren, Boulder, Colo.; claim 1500x150 feet; situated on James Creek, Central Mining district, three miles west of Jamestown, and patented; vein a well defined fissure, from four to seven feet wide, with walls of porphyry and slickenside; ore tellurium, principally of the class known as sylvanite, which mill-runs, when sorted, from $50 to $400 per ton; developments one main shaft 250 feet deep, with levels running east and west, aggregating about 550 feet in length, connecting with air and other shafts; improvements, engine, shaft and ore houses, assay-office, smith-shop, stables, office, and dwelling-house; and is equipped with good hoisting machinery, driven by a new fifteen-horse-power steam-engine.

**Kenelworth**—Wm. H. Nicholson, Sunshine, Colo., and Hobbs & Tuttle, Boston, Mass., owners; claim 1500x150 feet; situated on Big Horn Mountains, Gold Hill Mining district, eight miles from Boulder; vein a fissure, with a crevice of six feet, and a pay streak from ten to twenty inches of quartz carrying tellurium, which mill-runs, when sorted, from $50 to $300 per ton; developed by one shaft eighty feet in depth and one tunnal eighty feet in length

**Keystone Group.**—D. E. Patterson, Jamestown, Colo.; owner; group comprises four claims 1500x150 feet each; situated on Golden Age Mountain, Central Mining district, one mile from Jamestown: located 1882; vein a fissure, with a crevice from six to fourteen feet wide, and a pay streak from two to six inches of quartz carrying galena and free gold, which assays from $40 to $60 per ton; developed by tunnel forty feet in length, and shafts aggregating fifty-four feet.

**King William.**—J. J. Cullacott, R. A. Bigger, Joseph Blackburn and John Sutherland, Salina, Colo., owners; claim 1500x150 feet; situated on Yellow Pine Mountain, Sugar Loaf Mining district; located 1879; vein a fissure, with a crevice of six feet, the claim being an extension of Yellow Pine lode, and possessing similar characteristics; developed by tunnel sixty feet in length.

**King William.**—Antoine Hallvart and John Sailer, Ward, Colo., owners; claim 1500x150 feet; situated one mile east of Ward, Ward Mining district, and nineteen miles from Boulder; located 1882; vein a fissure, with a crevice from two to five feet, and a pay streak from one to eight inches of iron pyrites carrying gold and silver, which assays four ounces gold and ten ounces silver per ton; developed by shaft forty feet in depth.

**La Loma Group Mining Company (The).**—Incorporated under the laws of West Virginia; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, D. R. Patterson, Philadelphia, Pa.; secretary, H. C. Eggleston, Philadelphia; office 112 Stock Exchange Place, Philadelphia, Pa.; agent, H. A. Haskin, Jamestown, Colo.; owns the La Loma group, comprising the La Loma, Pioneer, Ben Franklin, Bouncer, and one other lode, 1500x150 feet each; situated at the head of Spring Gulch, near Jamestown; located 1881 and 1882; veins all fissures, with crevices from one to four feet wide, and pay streaks from three to twelve inches of quartz carrying free gold, which mill-runs from $30 to $50 per ton.

**Lafayette Mining and Developing Company (The).**—Incorporated under the laws of New York, May, 1882; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president and treasurer, Herbert Van Keuren, of South Carolina; secretary and superintendent, Cornelius Van Keuren, Sunshine, Colo.; office Sunshine; owns the Lafayette, 1500x150 feet; situated on Lee Hill, two and one-half miles from Sunshine, and nine miles from Boulder; vein a fissure, with a crevice of four feet, and a pay streak from three to twelve inches of quartz carrying tellurium and free gold, which mills, when sorted, from $100 to $400 per ton; developed by shaft ninety feet in depth, and level fifty feet in length.

**Langley Group.**—T. Langley, Ward, Colo., owner; group comprises the Langley, Sherman, Jolly, and Mary lodes; 1500x150 feet each; situated one-half mile from the town of Ward, in Ward Mining district; located 1876 and 1882; veins all fissures from two to four feet in width, pay streaks from five to twenty inches of quartz, galena, and iron pyrites, which assays from $25 to $70 per ton; developed by seven shafts, ranging from twenty-five to seventy-five feet in depth.

**Lilly of the West.**—Louis Kauffman, Jamestown, Colo., owner; claim 1500x150 feet; situated one mile north of Springdale, and twelve miles from Boulder Central Mining district; located 1876; vein a fissure two feet wide, pay streak from three to nine inches of galena in a quartz gangue, which mill-runs, when sorted, $55 per ton; developed by shaft twenty-seven feet deep, with drifts and forty-two feet of tunnels.

**Linnie Belle Tunnel.**—T. O. Saunders, Silver Cliff, Colo., A. and E. Ruggles, and others, of Denver, Colo., owners; claim 3000x6 feet; situated on Left-Hand Creek, nine miles north-west of Boulder; located in 1879; the tunnel is designed to open up and develop the veins in the hill above Left-Hand Creek.

**Little Alice.**—(See Merchants' and Miners' Tunnel Company.)

**Little Belle.**—Benjamin Hayman and Henry Deitz, Boulder, Colo., owners; claim 1500x150 feet; situated on Sugar Loaf Mountain, nine miles from Boulder; located 1875; vein a fissure, with a crevice three and one-half feet wide, and a pay streak from three to twelve inches of quartz carrying tellurium, which assays from $40 to $60 per ton; developed by two shafts 25 and 100 feet in depth, respectively, and tunnel sixty-five feet in length.

**Little Girl Group.**—Geo. W. Reardon, Jamestown, Colo., owner; group comprises four claims, 1500x150 feet each; situated in Central Mining district, four miles north-west of Jamestown, and nineteen miles north-west of Boulder; located 1881; vein a fissure, with a crevice from ten to forty feet, and a pay streak from three to fifteen inches of galena and copper pyrites, which assays twenty per cent copper and from six ounces to thirty ounces silver per ton; developed by shafts aggregating sixty-six feet in depth.

**Little Johnny.**—F. D. Vane, Salina, Colo., owner; claim 1500x150 feet; situated in Home, Sweet Home Gulch, Gold Hill Mining district, one-half mile from Salina; located 1881; vein a fissure, with a crevice two feet wide, and a pay streak of four inches of quartz carrying tellurium, which assays from $250 to $1,000 per ton; developed by adit eighty feet in length.

**Little Maud Mining Company (The).**—Incorporated under the laws of Pennsylvania; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Burtis Barbour, Philadelphia, Pa.; offices Boulder, Colo., and 303 Walnut street, Philadelphia Pa.; owns the Little Maud and Pickwick lodes, 1500x150 feet each; situated one-half mile from Magnolia, Magnolia Mining district; located 1875; vein a fissure, with a crevice three feet wide, and a pay streak from one to three inches of quartz carrying tellurium, which mill-runs, when sorted, about $50 per ton; developed by shaft 133 feet in depth, and levels aggregating 200 feet.



**Little Ralph.**—David and David E. Rowe, Boulder, Colo., owners; claim 1500x150 feet; situated on Ringold Mountain, Gold Hill Mining district, two and one-half miles from Gold Hill; vein a fissure, with a crevice of seven feet of quartz carrying tellurium, which assays an average of $80 per ton; developed by open cut of twenty feet.

**Live Yankee and C. C.**—James Phillips, Osborn, Colo., owner; claims 1500x150 feet each; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, twelve miles from Boulder; located 1881; veins both fissures, with crevices from one to four feet, and pay streaks from one to ten inches of galena in a quartz gangue, which assays from 50 to 100 ounces silver per ton; developed by two shafts twenty-eight and seventy-five feet in depth, respectively.

**Lizard and Eva.**—H. P. Stevens, Salina, H. M. Burk, and W. M. Lytle, Boulder, Colo., owners; claims 1500x150 feet each; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder; located 1882; vein a fissure, with a crevice three feet wide, and pay streak of eight inches of quartz carrying tellurium and free gold, which assays from $50 to $500 per ton; developed by tunnel twenty-two feet and open cut twenty-five feet in length.

**Longfellow Mining Company (The).**—President, T. F. Simmons, Jacksonville, Ill.; owns the Longfellow lode, 1500x150 feet; situated in Central Gulch, Central Mining district, and is patented; the vein is a fissure, averaging four feet in width, with an average pay streak ten inches in width of galena, gray copper, and sulphurets in a quartz gangue which mill-runs, when sorted, from $50 to $300 per ton; developments consist of a shaft 120 feet in depth, levels aggregating 200 feet, and a tunnel 200 feet in length; aggregate output $10,000.

**Magnetic.**—Owners Daniel Drummond and Joel T. St. Clair, Gold Hill; claim 1500x150 feet; located in 1877; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder; vein a vertical fissure three feet wide, pay vein from three to six inches; nature of ore, iron pyrites in a quartz gangue; average value, when sorted, $100 per ton; developed by two shafts thirty and sixty feet in depth, respectively.

**Main.**—Owners John Wyler, John Coughlan, and Wm. Dailey, Boulder, Colo.; claim 1500x150 feet; situated in Gordon Gulch, four miles from Nederland; located in 1879; vein a fissure, with a crevice of four feet, containing a vein-matter of quartz and galena, which assays thirty ounces of silver and one-half ounce of gold per ton; developed by a tunnel 180 feet on the vein.

**Marble Heart.**—Owners F. Peacock, J. Anderson, J. M. Maxwell, and Anthony Wilde, all Boulder, Colo.; claim 1500x150 feet; situated on Big Horn Mountain, Gold Hill Mining district, two and one-half miles from Gold Hill; located in 1874; vein a fissure, with a crevice two feet wide, and a pay streak from three to six inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, from $100 to $200 per ton; developed by shafts aggregating 200 feet; output $3,000.

**Marshal Coal Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1877; capital stock $30,000, in 300 shares of $100 each, non-assessable; president and general manager, A. G. Lang-

ford; secretary and treasurer, F. Lockwood—both Denver; offices, 299 Sixteenth street, Denver, Colo. This Company has a lease on 1,480 acres of coal land, the same being a portion of the Marshall Coal property, which last comprises 3,200 acres of coal land; owned by J. M. Marshall and A. G. Langford, both Denver, W. S. Lee, Chicago, Ill., and N. P. Langford, St. Paul, Minn.; covered by a great lignitic, coal-bearing formation; situated on the east side of South Boulder Creek, in Boulder County, five miles south-east of the town of Boulder, and in township 2, south, Jefferson County, about nineteen miles from Denver, in a northerly direction; two of which mines have been opened up by the Company; coal is well adapted for domestic purposes, and for the generation of steam and gas, and does not coke.

Mine No. 1, on east side of Boulder Creek, has a vein of coal from ten to twelve feet in thickness, of two separate layers, divided by a band of slate one foot thick; it is opened up by a stope 1,000 feet in length, and dips eight degrees to the south; 450 feet north of this stope a dip entry has been driven upon which are opened twenty rooms, showing the coal ten feet in thickness and free from impurities; during 1880 this vein produced 50,000 tons of coal.

Mine No. 2, on the north side of the valley, on a branch of South Boulder Creek, shows a strata of coal nine feet in thickness, which is considered to be the same as in mine No. 1; entries 315 feet from the west and 300 from the east have developed this vein; in addition to which there are thirty rooms opened up, from which but little coal has yet been taken, and which are now in condition to produce 250 tons of coal per day; both mines are equipped with all the necessary machinery for hoisting the coal, pumping the water, and for loading cars, etc.; and a branch of the Union Pacific Railroad runs direct to the mines; it is estimated that this entire property contains at least 100,000,000 tons of coal, two-thirds of which can easily be mined.

**Matt and Silver Button.**—Owners H. Jones and —— Burdett, Osborn, Colo.; claims 1500x150 each; situated near Sugar Loaf Mountain, Sugar Loaf Mining district, ten miles from Boulder; located in 1880; veins both fissures, with crevices from one to four feet in width, and pay streaks from one to ten inches of galena and sulphurets in a quartz gangue, which assays twenty-five per cent lead and eighty ounces silver per ton; developed by 120 feet of shafting.

**Maud and Cashier.**—Benjamin, John C., and Eliza Rowe, all Gold Hill, Colo., owners; claims 1500x150 feet each; situated on Big Horn Mountain, Gold Hill Mining district, nine miles from Boulder; veins both fissures, with crevices from three to six feet in width, and pay streaks from four to twelve inches of quartz carrying tellurium, which assays from two to twelve ounces gold per ton; developed by three tunnels, thirty, twenty-eight, and seventy feet in length, respectively.

**Mayerick.**—C. S. Cameron and Jacob Gayer, both Salina, Colo., owners; claim 1500x150 feet; situated one-half mile from Salina; located 1882, and patented; vein a fissure, with a crevice from one to five feet, and a pay streak from two to ten inches of quartz carrying tellurium, which mills, when sorted, from $100 to $5,000 per ton; developed by tunnel 175 feet in length.

**Melvina.**—Henry Meyring, Melvin Bailey, and M. Kessler, Boulder and Salina, Colo., owners; claim 1500x150 feet; situated on Melvina Hill, Gold Hill Mining district, nine miles from Boulder; located 1875, and patented; vein a fissure, with a crevice varying from ten to forty inches, and a pay streak from two to twelve inches of quartz carrying tellurium, which mill-runs, when sorted, from $25 to $10,000 per ton; developed by shaft 499 feet in depth, with levels aggregating 2,200 feet in length; aggregate output $300,000.



**Merchants' and Miners' Tunnel Company (The).**—Incorporated under the laws of Colorado, July 20, 1876; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, J. Jay Joslin; secretary, Otis O. Miles; treasurer A. B. Ingols—all Denver, Colo.; office Denver, Colo.; owns the Merchants' and Miners' Tunnel site, 3,000 feet; situated on the north side of Left-Hand Creek, Central Mining district; the purpose of the Company being to open up and develop twenty-four well defined fissure veins, all owned by the Company, viz.: Cameron, Old 49, Wide-Awake, Mermaid Extension, High-Flyer Extension, Stokes Extension, Range View, El Muerto, Yosemite, A. B. Ingols, Mountain Belle, Continental, Ophir, No Name, Left-Hand Fairy, Double-Header, First View, Home Stretch, Day Star, Little Nell, Cliff, and Cloud Burst, 1500x150 feet each; these veins cropping out on the surface from four to ten feet in width, containing quartz carrying gold and some tellurium; the tunnel is now 350 feet in length. The Company also owns the Little Alice lode, situated in the same locality, 1500x150 feet; vein a fissure ten feet wide, with a pay streak from three to ten inches of quartz, carrying tellurium and free gold, some of which has milled as high as $15,000, but the average of the vein is $65 per ton; developed by shaft 175 feet in depth and drifts 200 feet.

**Miner's Luck.**—D. S. Kaufman, Wm. Lashall, and John Winkler, all Longmont, Colo., owners; claim 1500x150 feet; situated on Lee Hill, Gold Hill Mining district, one and one-fourth miles from Sunshine; located 1879; vein a fissure, with a crevice from three to six feet wide, and a pay streak of three inches of quartz carrying tellurium, which assays $125 per ton; developed by two shafts forty-five and eighty feet in depth, respectively.

**Monitor.**—Owned by Wilson, Stanley & Co., Jamestown, Colo.; claim 1500x150 feet; situated one mile from Jamestown, in Central Mining district; vein a fissure, with a pay streak from six to fourteen inches in width of galena and iron and copper pyrites in a quartz gangue, which assays one and one-half ounces of gold and seventy-eight ounces of silver per ton; developed by two shafts twenty and thirty-five feet in depth, respectively.

**Monitor Group.**—Warmack, Ritter & Co., Boulder, Colo., owners; two claims, 1500x150 feet each; situated in Sand Gulch, Gold Hill Mining district, six miles from Boulder; located 1881; veins both fissures, with crevices six and ten feet in width, respectively, and pay streaks twelve and eighteen inches of quartz carrying tellurium, which assays from $100 to $3,500 per ton; developed by two shafts forty and forty-five feet in depth, respectively, and open cut thirty feet in length.

**Montezuma.**—Robert Peter, Springdale, Colo., owner; claim 1500x150 feet; situated on Rip Van Dam Mountain, one-fourth mile from Springdale; located 1882; vein a fissure, with a crevice three feet wide, and a pay streak from four to twelve inches of quartz carrying tellurium, which assays from $20 to $100 per ton; developed by tunnel thirty feet in length.

**Morning Star.**—Owned by Paul P. Miller, Ward, Colo.; claim 1500x150 feet; situated in Spring Gulch, one and one-half miles north-east of Ward, in Ward Mining district, and nineteen miles west of Boulder; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak from one to fifteen inches of iron pyrites and quartz carrying gold and silver, which mill-runs, when sorted, from one to three ounces gold per ton; developed by five shafts from twenty-five to fifty feet in depth and 150 feet of levels.

**Morning-glory.**—Owners Theo. Weiderhold and Prior Bros., all Boulder, Colo.; claim 1500x150 feet; situated at Somerville, ten miles north of Boulder; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak five inches of gray copper, brittle silver, and zinc, in a quartz

gangue; assays 150 ounces silver per ton; developed by shaft thirty-eight feet in depth, and drifts 110 feet in length.

**Mount Blanc.**—Owners Irwin Bros., Caribou, Colo., and —— Leavitt, Denver, Colo.; claim 1500x150 feet; situated on Caribou Hill, one-half mile from Caribou, in Grand Island Mining district; located in 1875; vein a fissure, with a crevice from one to four feet in width, and a pay streak from one to four inches of gray copper, brittle silver, and galena, in a quartz gangue, which assays from 250 to 500 ounces of silver per ton; developed by one main shaft ninety feet in depth, and 125 feet of levels.

**Mountain Chief Mining Company (The).**—Superintendent, J. Pugh, Gold Hill, Colo.; owns the Mountain Chief Group, four claims and one tunnel site; situated one mile north-west of Gold Hill, Central Mining district; located in 1875; veins all fissures, with crevices from four to forty feet in width, and pay streaks from three to twenty inches of galena and iron pyrites in a quartz gangue, which mill-runs, when sorted, $100 per ton; developed by one shaft 330 feet in depth, one tunnel 530 feet in length, and drifts aggregating 2,500 feet; worked by a twelve-horse-power engine; output $60,000

**Mountain King.**—Owned by H. Berry and Alonzo Fones, both Sunshine, Colo.; claim 1500x150 feet; situated at Sunshine, Gold Hill Mining district; vein a fissure, with a pay streak six inches in width, containing quartz carrying tellurium and free gold, with occasional pockets of the same minerals scattered through the vein-matter, which mill-runs, when sorted, from $50 to $4,000 per ton; developed by tunnel forty feet in length.

**Mountain Lode Group and Mill-site.**—Owned by Dr. —— Mortimer, Denver, Colo.; group embraces five claims, 1500x150 feet each; situated four and one-half miles from Nederland, in Grand Island Mining district; veins all fissures, with crevices from four to twelve feet in width, containing quartz carrying galena and sulphurets, which mill-runs, when sorted, eighty ounces silver per ton; developed by four tunnels, 160, 170, 185, and 400 feet in length, respectively, and levels aggregating 1,000 feet; output $90,000.

**Mountain Queen and Mountain King.**—Miles Grant, Jamestown, Colo., owner; claims 1500x150 feet each; situated in Camp Balarat, Central Mining district, four miles from Jamestown; located 1882; veins all fissures, with crevices about four feet wide, and pay streaks from three to six inches of quartz carrying tellurium and free gold, which assays from $50 to $500 per ton; developed by two shafts ten and sixty-five feet in depth, respectively.

**Mountain Treasure.**—David Evans, Somerville, Colo., owner; claim 1500x150 feet; situated at Somerville, Gold Hill Mining district, and patented; this property is developed by a tunnel which is now 300 feet in length, and has cut four veins of galena and gray copper, which assay similar to the Morning-glory.

**Mineral Point.**—G. A. Jones & Co., Denver, Colo., owners; claim 1500x150 feet; situated three fourths of a mile north of Jamestown, in Central Mining district, and patented; vein a fissure, with a crevice five feet wide, containing a quartz vein-matter through which is interspersed considerable free gold, which mill-runs, when sorted, an average of $40 per ton; developed by tunnel seventy feet in length.

**Mount Sterling.**—J. W. McFall, Gold Hill, Colo., owner; claim 1500x150 feet; situated on Gold Hill, Gold Hill Mining district, ten miles from



Boulder; located 1875; vein a fissure three feet wide, and pay streak from four to ten inches of quartz carrying tellurium and free gold, which assays an average of $50 per ton; developed by two shafts fifteen and twenty feet in depth respectively.

**Napoleon.**—Owned by Louis Koehler, Boulder, Colo.; claim 1500x150 feet; situated at Sunshine, in Gold Hill Mining district, and patented; vein a fissure, with a crevice two feet in width, containing two pay streaks varying from one to six inches each, although the mineral, which is quartz carrying tellurium and free gold, is sometimes found in large pockets; an average mill-run on the pay streak shows $250 per ton; developments consist of one tunnel forty-two feet in length and four shafts ten to thirty-three feet in depth.

**Native Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock $1,000,000, in 200,000 shares of $5 each; president, —— Curtin; secretary and treasurer, John T. Graham—both, New York City; agent, Thomas R. Owen; superintendent, Job W. Irwin; offices Boulder, Colo., and 18 Wall street, New York City; owns the Native Silver Group of five lodes, 1500x150 feet each; situated on Caribou Hill, Grand Island Mining district, four of which are patented, and all containing fissure veins from one to four feet in width, with pay streaks of galena, sulphurets, gray and yellow copper, in a quartz gangue, from ten to twenty inches in width, which mill-runs, when sorted, from 100 to 1,000 ounces of silver per ton; developed by shafts 860 feet in depth, and levels aggregating 1,700 feet; output $1,000,000.

**Nattie.**—Owned by W. H. Nicholson, Salina, Colo., and Joseph Ham, Boston, Mass.; claim is 1500x150 feet, and it is an extension of the Ingram lode, possessing similar characteristics; situated in Silver City Gulch, Gold Hill Mining district, two miles from Gold Hill; developments consisting of cross-cut tunnel seventy-five feet, drift on the vein seventy-five feet, also shaft fifty feet in depth.

**Nautilus and Promise.**—Owners Rufus Gray, A. Perry, and Samuel Richards, all Caribou, Colo.; claims 1500x150 feet each; situated on Caribou Hill, Grand Island Mining district, near town of Caribou, and patented; veins both fissures, with crevices from two to four feet wide, and pay streaks from four to eight inches of galena, copper pyrites, and green copper, in a quartz gangue; assays from 50 to 100 ounces of silver per ton; developed by tunnel 100 feet long, and drifts aggregating 130 feet in length.

**Nelson.**—Owned by Delevan Peck, 299 Hamilton street, Albany, N. Y.; claim 1500x150 feet; situated three-fourths of a mile from Ward, in Ward Mining district, and patented; vein a fissure, with a crevice two feet wide, containing iron pyrites carrying gold in a quartz gangue, which mill-runs, when sorted, $100 per ton; developed by shaft 170 feet in depth, and 500 feet of levels; worked by a fifteen-horse-power engine.

**New Jersey Mill.**—Owned by the Native Silver Mining Company; situated at Caribou, Grand Island Mining district, twenty-three miles from Boulder; has a capacity for treating ten tons of ore per day.

**Niagara.**—Owners Henry Sherman and Theo. Clemens, both Jamestown, Colo.; claim 1500x150 feet; situated on Buena Hill, Central Mining district, one mile from Jamestown, and sixteen miles from Boulder; located 1882; vein a fissure, with a crevice four feet wide, and a pay streak from four to eight inches of quartz carrying tellurium and free gold, with gold scattered through the entire vein-matter; which mill-runs, when sorted, from $50 to

$1,000 per ton; developed by shaft forty-five feet in depth and forty feet of levels; output $800.

**Nichols' Concentrating Mill.**—Owners H. N. Nichols, Denver, Colo., Thomas N. Shanks, W. L. Seeley, Phil. J. Lonergan, and M. F. Leech, all Boulder, Colo.; office Boulder, Colo.; works situated on Left-Hand Creek, one and one-half miles north-east of Gold Hill, and thirteen miles from Boulder; main building 77x50 feet, built in a terrace of four floors, and containing eighteen Stamps, Forester's Crusher, four sets of Concentrating-tables; worked by two engines, five and ten horse-power, respectively.

**Ni Wot Mill.**—Owned by the Resumption Mining Company (see Resumption Mining Company); mill is situated at Ward, and contains 125 Stamps, also Reduction and Concentrating machinery; motive power for which is supplied by 125-horse-power engine.

**Noble Ellen.**—E. Elliott, Jamestown, Colo., owner; claim 1500x150 feet; situated on Bondholder Hill, Central Mining district, two and one-half miles from Jamestown; located 1871; vein a fissure, with a crevice of three feet, and a pay streak from four to six inches of quartz carrying free gold and silver, which assays from five to ten ounces of gold and from twenty-five to fifty ounces of silver per ton; developed by shaft twenty feet in depth.

**Norombega Mining Company (The).**—Incorporated under the laws of Colorado in July, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and treasurer, C. B. Brown; vice-president, P. J. Harmount—both Denver; superintendent, C. M. Harmount, Boulder, Colo.; offices Denver and Boulder, Colo.; own the Norombega Tunnel site, 3,000 feet long; situated on Norombega Mountain, Sugar Loaf Mining district, eleven miles from Boulder; on which a tunnel is driven 225 feet in length, and which will cut fifty well defined lodes on the same slope of the mountain, which carry gray copper and galena.

**North Star.**—Louis Kauffman, F. C. Buckerdee, and Francis Hill, all Jamestown, Colo., owners; claim 1500x150 feet; situated in Balarat Camp, eighteen miles from Boulder; located 1880; vein a fissure two feet in width, and a pay streak of six inches of quartz carrying tellurium and free gold; developed by shafts from ten to twenty-five feet in depth.

**Ontario and Arizona.**—Owners Irwin Bros., Caribou, Colo., and — Leavitt, Denver, Colo.; claims 1500x150 feet each; situated on Caribou Hill, Grand Island Mining district, twenty-two miles from Boulder; located 1870, and patented; veins both fissures, with crevices two feet wide, and pay streaks from four to six inches of galena, gray copper, and native silver, in a quartz gangue, which assays from 200 to 500 ounces silver per ton; developed by shaft 140 feet in depth and 140 feet of levels.

**Ophir.**—(See Senator Hill lode.)

**Perrigo.**—Owners Ulysses Pugh and others, Central City; claim 1500x150 feet; located 1864; situated on Caribou Hill, Grand Island Mining district, twenty-three miles from Boulder; vein a fissure four feet in width; pay vein from ten to fifteen inches; nature of ore, iron and copper pyrites; average value $50 per ton; developments, one shaft sixty feet deep, shaft-house 12x20 feet.

**Pet and Cheap John.**—James E. Du Bois & Bros., Jamestown, Colo., owners; claims cover 3000x150 feet; situated on Porphyry Hill, Central Mining district, two miles from Jamestown; located 1879; vein a fissure, with a crevice seven feet wide, and a pay streak from ten to eighteen inches of quartz carrying free gold and iron pyrites, which assays from $50 to $150 per ton; developed by two shafts 20 and 100 feet in depth, respectively.



**Philadelphia Group.**—A. J. Waggoner and M. F. Leech, both Boulder, Colo., owners; group comprises the Philadelphia, Centennial, and Southern Wisconsin lodes, 1500x150 feet each; situated in Waggoner's Camp, Magnolia Mining district, one and one-half miles from Magnolia; located 1882; veins all fissures, with crevices varying from two to eight feet in width, and pay streaks from four to eight inches of quartz carrying tellurium, which mill-runs, when sorted, an average of $32 per ton; developed by 111 feet of shafts.

**Phillips Group.**—Owned by Col. Phillips, Boulder, Colo., and G. P. Wood, Sugar Loaf, Colo.; group comprises the Phillips, Franklin, and Summit lodes, 1500x150 feet each; situated on Wood Mountain, Sugar Loaf Mining district, near Sugar Loaf, and patented; veins are all fissures, with crevices from three to ten feet wide, and pay streaks from four to twelve inches of gold-bearing quartz, which will be intersected by the Wood tunnel at a depth of from 500 to 900 feet, the tunnel being now 300 feet in length.

**Phillips Placer.**—S. Phillips, Boulder, Colo., owner; claim forty acres; situated on Four-Mile Creek, Sugar Loaf Mining district, six miles from Boulder; developed by flume 400 feet in length; output $10,000.

**Pine Shade.**—R. S. McClellan and T. F. Hendershot, both Boulder, Colo., owners; claim 1500x150 feet; situated on Sugar Loaf Mountain, Sugar Loaf Mining district; located 1881; vein a fissure, with a crevice five feet wide, and a pay streak from three to twelve inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, from $25 to $75 per ton; developed by shaft sixty feet in depth; output $1,000.

**Pleasant View.**—Owned by Labbo Bros., Sunshine, Colo.; claim 1500x150 feet; situated at Sunshine, in Gold Hill Mining district; vein a fissure, with a crevice of four feet in width, and a pay streak from two to ten inches of quartz containing tellurium and free gold, which mill-runs, when sorted, from $100 to $400 per ton; developed by tunnel seventy-five feet in length and shaft thirty feet in depth.

**Poor Man.**—Owners F. P. Rosengarten and J. B. Janeway, both Jamestown, Colo.; claim 1500x150 feet; situated in Jamestown; located 1878; vein a fissure, with a crevice ten feet wide, and a pay streak from six to twelve inches of galena and iron pyrites in a quartz gangue, which assays from thirteen to twenty ounces silver per ton; developed by a shaft seventy feet in depth, and four open cuts from ten to fifteen feet in length, each.

**Poor Man Group.**—Owned by N. D. McKenzie and others, Caribou, Colo.; group comprises four claims, 1500x150 feet each; situated on Caribou Hill, Grand Island Mining district, twenty-two miles from Boulder; located 1859; veins all fissures from two to five feet in width, and pay streaks from six to twenty inches of galena, sulphurets, and copper, in a quartz gangue, which mill-runs, when sorted, from $50 to $200 per ton; developed by shaft 500 feet in depth, and levels aggregating 600 feet; worked by a forty-horse-power engine; output $60,000.

**Potosi.**—Owners A. J. McCorkle, Jamestown, Colo., and Joseph Mulhall, Jr., Denver, Colo.; claim 1500x150 feet; situated on Bondholder Mountain, in Central Mining district; vein a fissure, with a crevice four feet in width, and a pay streak eight inches in width of quartz containing tellurium and free gold, which mill-runs an average of $150 per ton; developed by shaft twenty feet in depth, and tunnel forty feet in length.

**Potosi.**—(See Eclipse.)

**Powhattan.**—Owners W. H. Cook and James A. Smith, both Boulder, Colo.; claim 1500x150 feet; situated on Gold Cliff Mountain, Boulder Mining district, four and one-half miles from Boulder; located 1879; vein a fissure, with a crevice from twenty to thirty feet in width, and a pay streak from three to thirty inches of quartz carrying tellurium, which mill-runs, when sorted, from $30 to $50 per ton; developed by adits and drifts which aggregate 250 feet.

**Pride of Orange County.**—Owners T. J. Murray and Henry Monell, both Sugar Loaf, Colo.; claim 1500x150 feet; situated one-half mile from Sugar Loaf Mountain, in Sugar Loaf Mining district, and ten miles from Boulder; vein a fissure, with a crevice three feet wide, and a pay streak from six to ten inches of quartz carrying tellurium, which assays from $100 to $125 per ton; developed by shaft thirty feet in depth.

**Pride of the Mountains.**—Henry Ruty and others, owners; claim 1500x150 feet; situated on Gold Cliff Hill, Boulder Mining district, five miles from Boulder, and patented; vein a fissure, with a crevice from four to six feet in width, and a pay streak from one to five inches of quartz carrying tellurium, which mill-runs, when sorted, from $50 to $500 per ton; developed by tunnel seventy feet in length and shaft thirty feet in depth; output $3,000.

**Prince Albert.**—H. F. and H. A. Learnard, both Gold Hill, Colo., owners; claim 1500x150 feet; situated on Gold Hill, Gold Hill Mining district, eight miles from Boulder; located in 1875; vein a contact ten feet wide, with a pay streak from six to ten inches of iron and sulphurets in a quartz gangue, which assays from $20 to $30 per ton; developed by shaft fifteen feet in depth.

**Princess.**—M. M. Cavanaugh, Richard Ball, and Mrs. L. R. Evans, all Jamestown, Colo., owners; claim 1500x150 feet; situated in Central Gulch, Central Mining district, two miles from Jamestown; located 1882; vein a fissure, with a pay streak of seven inches of quartz carrying free gold, averaging $100 per ton, and eighteen inches of galena in a quartz gangue, which assays fifty per cent lead and twenty ounces of silver per ton; developed by shaft sixty feet in depth and tunnel 100 feet in length; output $2,000.

**Printer Boy.**—Wamack, Ritter, & Gilman, Boulder, Colo., owners; claim 1500x150 feet; situated on Four-Mile Creek, Gold Hill Mining district, six miles from Boulder; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak from two to five inches of quartz carrying tellurium, which mill-runs, when sorted, $150 per ton; developed by a shaft fifty-five feet in depth and a tunnel sixty-five feet in length; output $3,500.

**Promise.**—(See Nautilus.)

**Prussian Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, A. D. Gifford; secretary, David Bestle—both New York City; superintendent, — Kirkbride, Boulder, Colo.; offices Boulder, Colo., and 26 Exchange Place, New York City; owns the Prussian and Pittsburgh, two adjoining claims on the same vein, 1500x150 feet each, making the property 3000x150 feet on one vein, a fissure, with a crevice from four to ten feet in width, and is situated on Gold Hill, Gold Hill Mining district; the ore is gold-bearing quartz, which mill-runs, on an average, $150 net per ton; developed by six levels, numbered from one to six, from 200 to 642 feet in length; winze 90, and shaft 180 feet in depth; the property has produced, net, after paying all charges, $118,500, and has paid in dividends to November 1, 1882, $117,000; ore in sight estimated at $750,000; also own two stamp-mills of twenty and forty Stamps, respectively, whose combined capacity is sixty tons of ore per day.



**Prussian Prince.**—Owners Wm. Heerdt, John Waterman, Henry Blatzheimer, and Joseph Lamon, all Jamestown, Colo.; claim 1500x150 feet; situated at Camp Balarat, Central Mining district, eighteen miles north of Boulder; located 1880; vein a fissure, with a crevice five feet wide, and a pay streak from one to six inches of quartz carrying tellurium, which assays from $50 to $600 per ton; developed by two shafts thirty and forty feet in depth, respectively, and tunnel fifty feet in length.

**Queen of the Valley.**—Owners J. M. York, Sunshine, Colo., L. W. Russell, Charles Fish, W. D. Hemingway, and R. Smith, all Boulder, Colo.; claim 1500x150 feet; situated on Gold Hill, Gold Hill Mining district, twelve miles from Boulder; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak from six to eighteen inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, from $24 to $40 per ton; developed by a tunnel 140 feet in length.

**Rambler.**—Owned by Samuel Orr, Jamestown, and John Miller, W. W. Flagg, and R. B. Stark, all Central City, Colo.; claim 1500x150 feet; situated on Golden Age Hill, Central Mining district; vein a fissure, with a crevice from two to three feet in width, showing a continuous pay streak ten inches wide of quartz carrying tellurium and free gold, which mill-runs, when sorted, an average of $100 per ton; developed by two shafts fifty and twenty-five feet deep, respectively, and a drift thirty feet in length from the bottom of the twenty-five-foot shaft.

**Red Cross Tunnel.**—John Hite & Co., Caribou, Colo., owners; claim 3,000 feet in length; situated on Bald Mountain, Grand Island Mining district, one and one-half miles from Caribou, on which a tunnel is driven 325 feet in length, designed to cut all the known and blind veins in its course.

**Reliable.**—Andrew Peterson, Magnolia, Colo., owner; claim 1500x150 feet; situated three-fourths mile from Magnolia, in Magnolia Mining district; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak from six to twenty inches of quartz carrying tellurium, which assays from $80 to $250 per ton; developed by shaft seventy-five feet in depth.

**Reliance and Eddison.**—B. Sanders and J. M Taylor, both Gold Hill, Colo., owners; claims 1500x150 feet each; situated four miles north-east of Gold Hill, Central Mining district; located in 1881; vein a fissure, with a crevice of four feet, and two pay streaks ten and eighteen inches wide, respectively, of gray copper and iron pyrites, in a quartz gangue, which assays from $60 to $150 per ton; developed by tunnel on the vein 104 feet in length.

**Resumption Mining Company (The).**—Incorporated under the laws of New York, in 1880; president, C. H. Tompkins; secretary, Wm. B. Carr; treasurer, N. D. Wendal—all New York; superintendent, Delevan Peck, Ward, Colo.; offices 15 Courtland street, New York City, and Ward, Colo.; owns the Ni Wot lode, 1500x600 feet; situated on Ni Wot Hill, in Ward Mining district, twenty miles from Boulder, and patented; vein a fissure, from three to eight feet in width, pay streak from six to thirty-six inches, containing quartz carrying gold, which mill-runs, when sorted, from $12 to $150 per ton; developed by shaft 430 feet in depth and 1,000 feet of levels; output $700,000; also owns two mill-sites, on which the Company have erected a 125-stamp mill, concentration and reduction works. (See Ni Wot Mill.)

**Rico Group.**—Owned by Osborn, Cowie & Co., Boulder and Nederland, Colo.; group comprises the Rico, Alto, Ben Lomond, and Osborn lodes; 1500x150 each; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, ten miles from Boulder; located in 1880 and 1881; veins are fissures, with crevices from two to four feet in width, and pay streaks from four to eight inches of gray copper, galena, ruby silver, and sulphurets in a quartz gangue, which assay, from 50 to 400 ounces of silver per ton; developed by shafts aggregating 160 feet in depth.

**Ringgold.**—Owners G. F. Mayer, George Reemer, and D. H. Sayler, all Salina, Colo.; claim 1500x150 feet; situated on Ringgold Mountain, Gold Hill Mining district, eight miles from Boulder; located 1875; vein a fissure, with a crevice from four to twenty inches of quartz carrying tellurium, which assays $100 per ton; developed by three shafts, 30, 40, and 112 feet in depth, respectively, and levels aggregating 130 feet in length.

**Rip Van Dam.**—Owned by F. L. Higby, Longmont, Colo., W. R. Lafourcade, Philadelphia, Pa., and Britton A. Hill, St. Louis, Mo.; claim 1500x150 feet; situated in Castle Gulch, Central Mining district, near Springdale, and patented; vein a fissure, with a crevice from four to five feet in width, and a pay streak from six to twenty-four inches containing gold-bearing quartz and rich pockets of tellurium, which mill-runs, when sorted, an average of $250 per ton; developed by tunnel on the vein 100 feet in length, a cross-cut tunnel 100 feet in length, and two shafts twenty-five and fifty-five feet in depth, respectively; output $15,000.

**Ritchey Group.**—Owned by J. J. Ritchey, Boulder, Colo.; group embraces seven claims, 1500x150 each; situated on Gold Cliff Mountain, Boulder Mining district, four miles from Boulder; located 1878; veins all fissures, with crevices from ten to twelve feet in width, and pay streaks from two to ten inches of quartz carrying tellurium, which mill-runs, when sorted, from $200 to $300 per ton; developed by two shafts forty and ninety-six feet in depth, respectively, and three tunnels aggregating 320 feet in length; output $12,000.

**Rob Roy and Revenue.**—Owners I. F. Monell, Crisman, Colo., M. H. Chamberlain and H. Charles Ulman, both Denver, Colo.; claims 1500x150 feet each, adjoining each other on the Yellow Pine vein; situated on Yellow Pine Mountain, Sugar Loaf Mining district, eight miles from Boulder; located in 1881; veins all fissures, containing gray copper and sulphurets in a quartz gangue, which mill-runs, when sorted, from 28 to 300 ounces silver per ton; Rob Roy developed by tunnel sixty feet in length, and shaft thirty feet in depth, and Revenue developed by shaft fifty feet in depth.

**Rocky Mountain Mammoth.**—Owned by C. S. Stowell, Magnolia, Colo., and A. J. Emrick, Boulder, Colo.; claim 1500x150 feet; situated in Magnolia Mining district, ten miles from Boulder; located 1879; vein a fissure, with a crevice fifty feet wide, and a pay streak from six to thirty inches of gold-bearing quartz, which assays from $400 to $500 per ton; developed by shaft 100 feet in depth and 95 feet of drifts.

**Rocky Ridge.**—Owners O. Christopher and S. D. Sibley, both Gold Hill, Colo.; claim 1500x150 feet; situated on Gold Hill, Gold Hill Mining district, nine miles from Boulder; located 1882; vein a fissure, with a crevice three feet wide of quartz carrying tellurium ore; developed by shaft ten feet in depth.

**Rollins.**—Owned by O. E. and E. S. DuBois, both Jamestown, Colo.; claim 1500x150 feet; situated on Porphyry Mountain, one and one-half miles from Jamestown; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak of twelve inches of quartz carrying free gold, which mill-runs, when sorted, from $20 to $120 per ton; developed by shaft fifty feet in depth and thirty feet of levels; output $400.



**Roman Eagle.**—Owned by Philip Rearden, Jamestown, Colo.; claim 1500x150 feet; situated at Jamestown, Central Mining district; vein a fissure, with a crevice eight feet in width containing three pay streaks, aggregating thirty inches in width, of galena and sulphurets in a quartz gangue, which assays from $150 to $260 per ton; developed by shaft thirty-five feet in depth, and tunnel now being run in 200 feet by contract.

**Romance.** Owned by Cyrus Taylor, Springdale, Colo.; claim 1500x150 feet; situated on the main branch of Central Gulch, in Central Mining district; located in 1877; vein a fissure, with a crevice four feet in width, and a pay streak from six to eighteen inches in width of tellurium and free gold in a quartz gangue—the gold being in pockets, and appears almost in a pure state; developed by shaft eighty feet in depth, and tunnel twenty-five feet in length.

**Santa Fe.**—Owned by E. Rowland, Boulder, Colo.; claim 1500x150 feet; situated on Gold Hill, Gold Hill Mining district, one and one-half miles from Gold Hill, and ten miles from Boulder; located 1877; vein a fissure, with a crevice nine feet wide, and a pay streak from four to twelve inches of galena, zinc blende, and iron pyrites, in a quartz gangue, which assays $42 per ton; developed by tunnel 100 feet in length, and shaft 30 feet in depth.

**Seely Mining Company (The).**—Incorporated under the laws of the Territory of Wyoming; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, L. Seely; secretary and treasurer, T. N. Shanks; superintendent, Phil. J. Lonergan—all Boulder, Colo.; office Boulder, Colo.; owns the Kekeonga lode claim, 1500x150 feet; situated on Magnolia Mountain, Magnolia Mining district, one-half mile from Magnolia; located 1875; patented 1879; vein a fissure, with a crevice four feet wide, and a pay streak from six to twenty inches of quartz carrying tellurium, which mills, when sorted, from $50 to $200 per ton; developed by shaft 165 feet in depth, and levels aggregating 400 feet.

**Senator Hill and Ophir.**—Owned by Andrew Peterson, Magnolia, Colo., and others of Boulder, Colo.; claims 1500x150 feet each; situated at Magnolia, Magnolia Mining district; located 1880 and 1875; veins both fissures, with crevices from three to six feet in width each, that intersect each other, of quartz carrying tellurium ore in rich pockets, which mill-runs, when sorted, from $1,000 to $10,000 per ton; developed by six shafts, ranging from 25 to 130 feet in depth, and levels of 40 feet, opening the vein for 600 feet; output since August, 1882, over $75,000.

**Senator Tabor and Fortune.**—Owners Clement C. Eddy, F. Lloyd, and H. N. Webb, all Salina, Colo.; claim 1500x150 feet; situated 500 feet east of Salina, Gold Hill Mining district; located in 1882; vein a fissure, with a crevice five feet wide of quartz carrying galena and gray copper, which assays 130 to 600 ounces of silver per ton; Senator Tabor is developed by shaft 40 feet in depth; Fortune by shaft 130 feet in depth.

**Side-show.**—Owners L. S. and J. J. Bloomfield and I. F. Monell, all Sugar Loaf, Colo.; claim 1500x150 feet; situated at Gold Hill, Gold Hill Mining district, twelve miles from Boulder; located in 1881; vein a fissure, with a crevice twenty feet wide, and a pay streak from six to eighteen inches wide of galena and copper in a quartz gangue, which assays six-tenths ounce

gold and fifty-five ounces silver per ton; developed by shaft twenty feet in depth.

**Silver Queen.**—Owners G. B. Stanley, L. T. House, and A. J. McCorkle, all Jamestown, Colo.; claim 1500x150 feet; situated one mile west of Jamestown, on Little Jim Creek, Central Mining district; vein a fissure, with a crevice five feet in width, and a pay streak eighteen inches wide containing galena and iron in a quartz gangue, which assays $32 per ton in gold and silver; developed by an open cut and a small shaft.

**Silver Star.**—Owned by Berger Bros. & Co., Caribou, Colo.; claim 1500x150 feet; situated on Caribou Hill, one-fourth mile from the town of Caribou; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak of ten inches of galena, sulphurets, and gray copper, in a quartz gangue, which assays 250 ounces silver per ton; developed by shaft sixty feet in depth.

**Simpson Stamp-Mill.**—Owned by Robert Simpson, John street, Cincinnati, Ohio; building 70x30 feet, situated at Jamestown, containing five Stamps and two Frue Vanners; worked by a twelve-horse-power engine, and has capacity for treating six tons of ore per day.

**Sitting Bull**—Owners J. H. Vandercook, Crisman, Anthony Wilde, Boulder, John Beckman, Salina, and B. C. Sawyer, Denver, Colo.; claim 1500x150 feet; situated on Big Hornet Mountain, Gold Hill Mining district, one-half mile from Salina; located in 1881; vein a fissure, with a crevice thirty inches wide, and a pay streak from one to four inches of quartz carrying tellurium and free gold, which assays $24 per ton; developed by two shafts thirty and forty feet in depth, respectively.

**Slide and Spur.**—Owners David F. Moffat and Wm. L. Campbell both Denver, Colo.; offices, 517 Larimer street, Denver, and Gold Hill, Colo.; superintendent, J. R. Lufen; claims 1500x150 feet each; situated on Gold Hill, Gold Hill Mining district, ten miles from Boulder; located 1875, and are patented; veins both fissures, with crevices two and one-half feet in width, and pay streaks of eighteen inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, from $100 to $3,000 per ton; developed by a shaft 660 feet in depth, and levels aggregating 2,000 feet, and is also cut by Corning tunnel 700 feet in length, which intersects the shaft at a depth of 550 feet; worked by a fifty-horse-power engine. This mine has been a heavy producer, and it is estimated that there is $300,000 worth of ore in sight.

**Smith and Shields.**—Owned by B. F. Smith, Denver, Colo., and others; claims 1500x150 feet each; situated in Sugar Loaf Mining district, seven miles from Boulder; vein a fissure, with a crevice eighteen inches wide, and a pay streak of two inches of gray copper and sulphurets in a quartz gangue, which assays seventy-five ounces silver per ton; Smith is developed by two tunnels 90 and 150 feet in length, respectively; Shields developed by tunnel 100 feet in length.

**Smoky Hill Group.**—Owned by C. S. Paley & Co., Boulder, Colo.; group comprises the Smoky Hill, Second Hold, and Iron Silver lodes; claims 1500x150 feet each; situated on Sugar Loaf Mountain, Sugar Loaf Mining district, ten miles from Boulder; located 1877, 1879, and 1881, respectively, and partially patented; veins all fissures, with crevices from two to five feet in width, and pay streaks from one to five inches of quartz carrying tellurium, galena, and zinc, which assays from $50 to $5,000 per ton; developed by two shafts fifty and seventy-five feet in depth, respectively, and twenty-five feet of levels.



**Smuggler Group.**—Owners W. H. Lessig, B. H. Eaton, S. S. Kennedy, and Richmond Bros., all Denver, Colo.; superintendent, T. M. Moore, Boulder, Colo.; group of claims all patented, and situated in Camp Balarat, Central Mining district, eighteen miles from Boulder; located 1876; veins all fissures, with average crevices of four feet in width, and pay streaks from six to twelve inches of quartz carrying tellurium and sylvanite, which mill-runs, when sorted, from $600 to $6,000 per ton, and two feet of concentrating ore, mill-running $40 per ton; developed by two shafts 175 and 425 feet in depth, respectively, 1,500 feet of levels, three tunnels 100 feet each in length, and 1,000 feet of drifts; output $410,000; also own a concentration-mill at the mine.

**Song Bird Group.**—Owners C. W., G. W., and F. S. Reardon, all Jamestown, Colo., H. M. Pierce and A. F. Bloomer, both Wyoming, Ills.; group comprises four claims, 1500x150 feet each; situated in Central Mining district, two miles from Gold Hill, and nine miles from Boulder; located 1880; veins all contacts, with crevices from two to thirty feet in width, and pay streaks from three to thirty-six inches of sulphurets and carbonates of lead, which assay from $20 to $150 per ton; developed by open cuts aggregating 1,000 feet.

**Sovereign People.**—Owned by H. H. Pugh & Co.; claim 1500x150 feet; situated on Pugh Mountain, Grand Island Mining district, twenty miles from Boulder, and patented; vein a fissure, with a crevice four feet wide, and a pay streak from three to twelve inches of galena and sulphurets in a quartz gangue, which assays from 100 to 600 ounces silver per ton; developed by two shafts 100 and 150 feet in depth, respectively.

**St. George.**—Owned by H. Johnson, Sunshine, Colo.; claim 1500x150 feet; situated on Lee Hill, Gold Hill Mining district, three-fourths of a mile from Sunshine; located in 1882; vein a fissure, with a crevice from six to eight feet in width, and a pay streak from two to twelve inches of quartz carrying tellurium and free gold, which assays from $400 to $800 per ton; developed by three shafts, sixteen, thirty-seven, and fifty-five feet in depth, respectively.

**St. Julian.**—Owners Sherman Bros., J. D. Duffy, L. Joslyn and — Gifford, all Jamestown, Colo.; claim 1500x150 feet; situated four miles from Jamestown, Central Mining district; located in 1880; vein a fissure, with a crevice one foot wide, and a pay streak from two to six inches of quartz carrying free gold, which assays from $50 to $500 per ton; developed by two shafts forty and sixty feet in depth, respectively.

**St. Vrain.**—Owners Anthony E. Arnett, A. W. Bush, and O'Brien & Co., Boulder, Colo.; claim 1500x150 feet; situated one-half mile west of Sunshine, Gold Hill Mining district; vein a fissure, with a crevice four feet wide of quartz carrying tellurium, which assays from $50 to $250 per ton; developed by a shaft eighty feet in depth, and a tunnel 100 feet in length.

**Standard.**—Owners J. G. Evans, B. D. Peter, and Robert Peter, Jr., all Springdale, Colo.; claim 1500x150 feet; situated in Elk Horn Gulch, one and one-half miles from Springdale, Central Mining district; vein a fissure, with a crevice varying from ten to eighteen feet between walls, the vein-matter being green-stone porphyry containing numerous streaks of quartz; the pay streak proper varying from four to eighteen inches in width, and containing gold, galena, indigo copper, and copper and iron pyrites, with some zinc, which mill-runs, when sorted, from $20 to $400 per ton; developments consist of one shaft thirty feet deep, and three cuts and tunnels, 100, 90, and 170 feet on the vein, respectively.

**Standard and Gold Bar.**—Owners W. H. Nicholson, Sunshine, Colo., and J. Rupp, Denver, Colo., and others; claims 1500x150 feet each; situated on Sunshine Mountain, Gold Hill Mining district, one-half mile from Sunshine; located in 1873 and 1879, respectively; veins both fissures, with crevices one and one-half and five feet in width, respectively, and pay streaks from two to eighteen inches of quartz carrying tellurium, which assays from three to twenty ounces gold per ton; developed by six shafts aggregating 225 feet in depth; output $2,000.

**Stanley.**—Owners F. P. Rosengarten, J. B. H. Janeway, both Jamestown, Colo., and M. A. E. Whitner, Philadelphia, Pa.; claim 1500x150 feet; situated in Central Mining district, one mile from Jamestown; located 1879; vein a fissure, with a crevice twelve feet wide of quartz carrying free gold and iron pyrites, which assays from $40 to $80 per ton; developed by shaft forty feet in depth, and tunnel seventy feet in length.

**Star Consolidated Coal Mining Company (The).**—President, Theo. A. Dodge; secretary and treasurer, L. A. Wyman, both Boston, Mass.; general agent, G. M. Wilson, Denver, Colo.; offices Boston, Mass., and Denver, Colo.; mines embrace 160 acres of coal land; situated at Canfield, twelve miles from Boulder, and are patented; containing a stratum or vein of bituminous coal from five to six feet thick; developed by shaft 103 feet in depth, and entry 900 feet in length, with facilities for shipping 300 tons per day; yield for 1882, 25,000 tons of coal.

**Stephen Littler and Washington.**—Owned by W. H. Lamon and M. Peterson, Boulder, Colo.; claims 1500x150 feet each; situated one-half mile from Magnolia, in Magnolia Mining district; located in 1880; vein a fissure, with a crevice from four to ten feet wide, and a pay streak from four to six inches of quartz carrying tellurium, which assays from $50 to $600 per ton; developed by a tunnel seventy feet in length, and shafts aggregating 170 feet in depth.

**Sugar Loaf and Twin.**—Owned by David Hoffman, 115 Broadway, New York; superintendent, B. Bliss, Boulder, Colo.; claims 1500x150 feet each; situated one and one-half miles from Gold Hill, Sugar Loaf Mining district, and eleven miles from Boulder; located in 1875; veins both fissures, with crevices two feet wide of quartz carrying galena, gray copper, and iron pyrites, which mill-runs, when sorted, from $25 to $100 per ton; developed by a shaft 125 feet in depth, and a tunnel 250 feet in length; output $5,000.

**Summit.**—Owned by Alexander Campbell, Springdale, Colo.; claim 1500x150 feet; situated two miles east of Jamestown, Central Mining district; located in 1882; vein a fissure two and one-half feet wide, and a pay streak from two to five inches of gold-bearing quartz, which assays about $100 per ton; developed by two shafts fifteen and eighty feet in depth, respectively.

**Superior and Ohio.**—Owners Elias Eby and Conrad Apgar, both Boulder, Colo.; claims 1500x150 feet each; situated one-half mile from Sunshine, and seven miles from Boulder, Gold Hill Mining district; located in 1880; veins both fissures, with crevices three feet in width, and pay streaks from six to eight inches of quartz carrying tellurium and free gold, which assays from $50 to $500 per ton; developed by shafts aggregating 180 feet in depth, and tunnel twenty feet in length.

**Swan.**—Owners J. M. York, Sunshine, and R. Bain, Crisman, Colo.; claim 1500x150 feet; situated eleven miles from Gold Hill, Gold Hill and Central Mining districts, twelve miles from Boulder; located in 1882; vein a fissure, with a crevice three feet wide, and a pay streak of twenty inches of quartz carrying free-gold ore, which assays $24 per ton; developed by forty-five feet of shafts.



**Sydney Group.**—Consisting of the Sydney, Last Stake, and Hercules lodes; situated a short distance from Springdale, in Central Mining district; owned by Thomas H. Noland, O. N. Heckman, and Chas V. Clark, all Jamestown, Colo.; Sydney developed by a tunnel running thirty-two feet on vein, and several surface openings to prove up the territory, showing a very large crevice, with mineral at the surface for over 700 feet, assaying as high as 200 ounces silver per ton—the character of the ore being fine galena; the Last Stake has the same character of ore as the Sydney, and is developed by a shaft thirty feet in depth and a ten-foot adit; the Hercules has a telluride vein, with a crevice of about six feet, and a pay streak of some eighteen inches in width of fine concentrating ore, the concentrates bringing as high as $300 per ton; developed by a tunnel forty feet in length on the vein, and a ten foot adit.

**Telephone and Autophone.**—Owners M. J. Cummerford and Geo. Seal, both Magnolia, Colo.; claims 1500x150 feet each; situated one-fourth mile south of Magnolia, Magnolia Mining district; located in 1880; veins both fissures, with crevices forty feet in width, and pay streaks from two to twenty inches of gold-bearing quartz, which assays four ounces gold per ton; developed by tunnel 120 feet in length, and 100 feet of shafting.

**Tell.**—Owned by Henry Ritgley, Gold Hill, Colo.; claim 1500x150 feet; situated on Gold Hill, eight miles from Boulder; located in 1881; vein a fissure, with a crevice three feet wide, and a pay streak from ten to fourteen inches of quartz carrying tellurium, which assays $40 per ton; developed by three shafts from ten to twenty-five feet in depth.

**Ten-Forty and Amazon.**—Owners O. F. Whitford, Jamestown, Colo., and Robt. Simpson, Cincinnati, Ohio; claims 1500x150 feet each; situated three miles west of Jamestown, in Central Mining district, and eighteen miles from Boulder; veins both fissures, with crevices eight and twelve feet in width, respectively, and pay streaks of six and eight inches of quartz carrying pockets of black sulphurets and gray copper, which assays from 50 to 300 ounces silver per ton; developed by a tunnel sixty-five feet in length.

**Tenderfoot.**—Owners Frank J. Maldon, Richard Brown, and Henry Meyring, Boulder and Salina, Colo.; claim 1500x150 feet; situated on Melvina Mountain, Gold Hill Mining district, three and one-half miles from Gold Hill; located in 1881; vein a fissure, with a crevice ten inches wide, and a pay streak of three inches of quartz carrying tellurium and mercury, which assays from three to ten ounces gold per ton; developed by three shafts, forty, sixty-two, and seventy feet in depth, respectively, and two drifts thirty-five and fifty feet in length, respectively.

**Three Brothers.**—Owners J. J. Cullicott and H. Meyring, both Salina, Colo.; claim 1500x150 feet; situated on Melvina Hill, at Salina, and nine miles from Boulder; located in 1875; vein a fissure, with a crevice from one to three feet wide, and a pay streak of six inches of quartz carrying tellurium and free gold, which assays from $200 to $1,000 per ton; developed by a tunnel 250 feet long on the vein.

**Thunderbolt.**—Owners N. C. Peterson and F. I. Stewart, both Sunshine, Colo.; claim 1500x150 feet; situated on Lee Hill, one and one-half miles from Sunshine, and seven miles from Boulder, Gold Hill Mining district; located in 1878; vein a fissure six feet wide, containing two pay streaks six inches in width, each, of quartz carrying tellurium and free gold, which

assays from $100 to $500 per ton; developed by shaft thirty feet in depth, and tunnel 100 feet in length.

**Twin Cedar.**—Owned by Lee Jones, Langford, Colo.; claim 1500x150 feet; situated on west slope of Red Mountain, South Boulder Mining district, seven miles from Boulder; located in 1878; vein a fissure, with a crevice four feet wide, and a pay streak from two to three inches of gold-bearing quartz and gray copper, which assays $102 per ton in gold and silver; developed by three shafts, twelve, fifteen, and twenty-five feet in depth, respectively.

**U. P. Group.**—John Rice, Ward, Colo., owner; group comprises three claims, 1500x150 feet each; situated at town of Ward, Ward Mining district, twenty miles west of Boulder; located 1882; veins all fissures, with crevices from two to three and one-half feet in width, and pay streaks from six to ten inches of iron pyrites in a quartz gangue, both carrying gold and silver, which assays $40 per ton; developed by three shafts, ten, eighteen, and twenty-seven feet in depth, respectively.

**U. S.**—John Rice, Ward, Colo., owner; claim 1500x150 feet; situated three-fourths mile south of Ward, Ward Mining district, twenty miles from Boulder; located in 1882; vein a fissure, with a crevice five feet wide, and a pay streak from ten to twenty inches of iron pyrites and quartz, both carrying gold, which assays $30 per ton; developed by shaft twenty-four feet in depth.

**Union and Garibaldi.**—Angelo Ruvera, Salina, Colo., owner; claims, 1500x150 feet each; situated one mile from Salina, Sugar Loaf Mining district, ten miles from Boulder; located 1877 and 1880; veins both fissures, with crevices from two to four feet in width, and pay streaks from two to twelve inches of galena and gray copper in a quartz gangue, which assays from $40 to $80 per ton; developed by shaft thirty-one feet in depth and a cross-cut forty feet in length.

**Valley Forge.**—Eli Metcalf, D. Sutherland, and Lewis P. Shreider, all Boulder, Colo., owners; claim 1500x150 feet; situated on Big Horn Mountain, Gold Hill Mining district, one-half mile from Salina; located 1878; vein a fissure, with a crevice four feet wide, and a pay streak from six to ten inches of quartz carrying tellurium and free gold, and another pay streak of six inches of sulphurets in a quartz gangue, both of which assays from $150 to $200 per ton; developed by shaft sixty feet in depth.

**Valley View.**—J. W. Buck and E. D. Tankersley, both Springdale, Colo., owners; claim 1500x150 feet; situated in Castle Gulch, one mile from Springdale, Central Mining district, and is supposed to be the west extension of the Big Bonanza lode; located 1882; vein a fissure, with a crevice twenty feet wide of quartz containing tellurium; developed by shaft seventeen feet in depth and open cut twenty-five feet in length.

**Victoria.**—Leased to Messrs. Hansbrough, Somerville, Colo.; claim 1500x150 feet; situated at Somerville, Gold Hill Mining district, and patented; vein a fissure, with a crevice four feet in width, and a pay streak averaging twelve inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, from $50 to $400 per ton; developed by main shaft 250 feet in depth, and drifts aggregating 500 feet; 500 feet east from the above named workings is a shaft 125 feet in depth and levels aggregating 200 feet, and other smaller shafts; output $150,000.

**Wall Street.**—T. J. and J. M. Taylor, both Gold Hill, Colo., owners; claim 1500x150 feet; situated one-half mile south of Springdale and nine



miles north-west of Boulder, in Gold Hill Mining district; located in 1877, and patented; vein a fissure, with crevice twenty-five feet in width, and a pay streak from three to eighteen inches of quartz, gray copper, and iron pyrites, which assays from $20 to $400 per ton; developed by shaft twenty feet in depth, and drift from bottom of shaft eighteen feet in length.

**Warrior and Chieftain.**—D. H. Pike, Jamestown, Colo., owner; claims 1500x150 feet each; situated half mile from Jamestown, Central Mining district; located in 1879; vein a fissure, with a crevice four feet wide, and a pay streak from four to eighteen inches of quartz carrying free gold, which mill-runs an average of $15 per ton; developed by shaft sixty feet in depth.

**Washburn.**—C. W. Smith & Son, Sunshine, Colo., owners; claim 1190x150 feet; situated in the town of Sunshine, Gold Hill Mining district, seven miles from Boulder; located in 1879; vein a fissure, with a crevice varying from eighteen inches to six feet in width, and a pay streak of one to four inches of quartz carrying tellurium and free gold, which assays from $50 to $600 per ton; developed by four shafts, aggregating eighty-five feet in depth.

**Washington.**—(See Stephen Little.)

**Washingtonian and London.**—H. F. Learnard, Gold Hill, Colo, owner; claims 1500x150 feet each; situated in Sunshine Gulch, two miles north of Sunshine; located in 1875 and 1883, respectively; veins both fissures, with crevices four and seven feet wide, respectively, and pay streaks of four to ten inches of galena and gray copper in a quartz gangue, which assays from $50 to $110 per ton; developed by shaft fifteen feet in depth and adit thirty-six feet in length.

**Wealth Group.**—Consisting of the Equator, Forrest, Wealth, and Pewabic lodes, owned by Frank Walrod and B. G. Strock, both Jamestown; first two have no developments except assessment work, but show large bodies of low-grade ore; Wealth is opened by a cross cut tunnel at a depth of twenty-five feet, with thirty feet of drifting on the vein, showing a crevice six feet in width, with a pay streak ten inches, carrying free gold, tellurium, and also gray copper, from which tests have been made giving returns from $100 to $2,000 per ton; Pewabic is opened by a tunnel 125 feet long on the vein, showing a crevice eight feet between walls, and on the hanging-wall the pay streak varies from four inches to two feet in width, the ore from which runs from $20 to $60 per ton; the remainder of the crevice carries streaks which mill from $50 to $3,600 per ton.

**Webster City.**—E. Rowland, Boulder, Colo., owner claim 1500x150 feet; situated on Bald Mountain, at head of Pennsylvania Gulch, inSugar Loaf Mining district; located in 1874; vein a fissure, with a crevice twelve feet wide, and a pay streak twelve inches of galena, copper, and iron pyrites, in a quartz gangue, which assays from $20 to $100 per ton; developed by shaft 100 feet in depth.

**Welch Coal Mines.**—Owned by the Union Pacific Railway Company; mines embrace 450 acres of coal land; situated at Lounsville, nineteen miles north-west of Denver, containing a stratum, or vein, of bituminous coal from five to ten feet in thickness, and is developed by shaft 200 feet in depth; air shaft 200 feet in depth, and entries aggregating five and one-half miles in length; yield for 1882, 90,000 tons of coal.

**White Chief.**—F. Robidoux and Harry Francis, both Ward, Colo., owners; claim 1500x150 feet; situated three-fourths of a mile east of Ward, Ward Mining district; located 1880; vein a fissure, with a crevice two feet

wide, and a pay streak of eighteen inches of quartz carrying free gold and iron pyrites, which assays $50 per ton; developed by shaft forty feet in depth.

**Wild Cat.**—George W. Reardon and A. Clawson, both Jamestown, Colo., owners; claim 1500x150 feet; situated on James Creek, three miles from Jamestown; located in June, 1882; vein a fissure, with a crevice from four to five feet wide, and a pay streak from three to twelve inches of quartz carrying tellurium, which assays from $20 to $425 per ton; developed by two shafts ten and twenty-eight feet in depth, respectively.

**Winona Gold and Mining Company (The).**—Incorporated under the laws of New York; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Edward J. Randall; vice-president, Finley Anderson; secretary and treasurer, August Stein, all New York City; superintendent, H. C. Harrison, Gold Hill, Colo.; offices 61 Broadway, New York City, and Gold Hill, Colo.; owns the Winona Group, comprising the Winona, Eugene, Hoodoo, Slide Extension, Yellow Jacket, and Dexter lodes; situated on Gold Hill, Gold Hill Mining district, eight miles from Boulder, and patented; veins are fissures, with crevices from three to seven feet in width, and pay streaks from eight to twenty inches of quartz carrying tellurium and free gold, which mill-runs, when sorted, $200 per ton; developed by shafts aggregating 550 feet and two tunnels 60 and 125 feet in length, respectively; output $50,000.

**Wood Placer.**—G. P. Wood, Sugar Loaf, Colo., and S. P. Phillips, Boulder, Colo., owners; claim twenty acres; situated on Four Mile Creek. Sugar Loaf Mining district, ten miles from Boulder; developed by 500 feet of fluming; output $10,000.

**Wood Tunnel.**—G. P. Wood, Sugar Loaf, Colo., and S. P. Phillips, Boulder, Colo., owners; tunnel site 3,000 feet long; situated on Wood Mountain, Sugar Loaf Mining district, ten miles from Boulder; located in 1879; on which a tunnel 320 feet in length is driven, and which is intended to cut the Summit, Phillips, and other lodes on Wood Mountain, as well as any blind leads to be shown up in the progress of the work; the known veins carrying tellurium, iron pyrites, sulphurets, and zinc blende, usually in a quartz gangue.

**Yellow Pine Group.**—G. R. Williamson, Boulder, Colo., owner; group comprises Yellow Pine, Duroc, Gray Copper, Coercion, Vancluse, and Mitchner, 1500x150 feet each; situated on Yellow Pine Mountain, Sugar Loaf Mining district, five miles from Boulder; located 1873, and all patented, with exception of Coercion and Mitchner; veins all fissures, with crevices about four feet wide of quartz and gray copper, which mill-runs, when sorted, from 50 to 300 ounces silver per ton; developed by ten tunnels, ranging from 150 to 400 feet in length, and a winze 475 feet in depth; output $75,000; and it is estimated that there is in sight over $1,000,000 worth of ore.

**Young Caribou.**—Joseph Lovett, Denver, Colo., and Thomas E. Simmons, Caribou, Colo., owners; claim 1400x150 feet; situated on Caribou Hill, Grand Island Mining district, one-half mile from Caribou; located 1871; vein a fissure, with a crevice from two to four feet in width, and a pay streak from five to twenty inches of galena and gray copper in a quartz gangue, which assays from $50 to $200 per ton; developed by shaft ninety feet in depth.

# Chaffee County.

Though a comparatively new mineral field, and subject to the trials and obstructions incident to the more recently explored sections of the country, Chaffee County has made, and is making considerable progress. In 1880 its return was about $90,000 from all sources; in 1881 it advanced to $196,400, and in 1882 this amount was increased to $225,500. The mineral-bearing veins are chiefly argentiferous, and are enclosed in a granitic formation, with numerous great dikes of eruptive rocks in different varieties. In the County there are only a small number of well developed properties, a description of which will be found in their proper places. They have, however, shipped but little, owing to the cost of transportation and other drawbacks, but have in sight such immense reserves of ore as to warrant the statement that the County will at no distant date take a front rank as an ore-producer. It contains very many fine prospects, and appears to be rich in mineral resources of great extent and variety; but it has never yet been favored with the stimulus of excitement and abundant capital accorded to its neighbor, Lake. Notwithstanding all this, however, the results so far attained encourage the belief that it will eventually become a formidable rival to the great Carbonate Camp. Though the exhibits of bullion are comparatively small, yet they are steadily increasing as the prospects are converted into mines; and the number in process of development indicate pretty conclusively that heavy yields will mark their future operations.

Chaffee County has an area of 950 square miles, lying east of the Continental Divide, adjoining Lake County on the south, and has an estimated population of 13,000.

**A. T. Stewart.**—Charles J. Lydon, Alpine, Colo., and C. A. Clinton, St. Louis, Mo., owners; claim 1500x300 feet; situated on west slope of Boulder Mountain, Chalk Creek Mining district, one-half mile from Alpine; relocated 1880; vein a fissure, with a crevice of six feet, and a pay streak from six to eighteen inches of galena, copper and iron pyrites, and zinc in a quartz gangue, which assays one-half ounce gold and nine ounces silver per ton; developed by shaft ten feet in depth, and drift on the vein ninety feet in length.

**Albino.**—Lewis Davis, R. M. Cash, both St. Elmo, A. M. McMillen, Cañon City, D. C. Metsker, Topeka, Kas., owners; claim 1500x300 feet; situated in Pomroy Gulch, Chalk Creek Mining district, four miles from St. Elmo; located 1880; vein a fissure, with a crevice five feet wide; ore, gold and silver bearing quartz; assays $112 per ton; developed by tunnel sixty-five feet in length.

**Allie Belle.**—F. Shodl, J. Droch, and C. E. Felton, all Hancock, Colo., owners; claim 1500x150 feet; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, three-fourths of a mile from Hancock; located 1881; vein a fissure four feet in width of quartz carrying galena, which assays forty-six ounces silver per ton; developed by tunnel fifty feet in length.

**Anderson Group.**—Comprising five claims, 1500x150 feet each; J. Anderson, Garfield, Colo., owner; claims situated in Camp Summit, Monarch Mining district; located 1879; vein a fissure, with crevice seven feet wide; ore, argentiferous galena; assays from 75 to 100 ounces silver per ton; developed by tunnel eighty feet in length.

**Angie.**—E. H. Stafford, O. P. Stafford, John Payne, H. B. Payne, and others, all Buena Vista, Colo., owners; claim 1500x300 feet; situated on Mount Princeton, Cottonwood Mining district, eight miles from Buena Vista; located 1877; vein a fissure, with a crevice five and one-half feet wide, and a pay streak from four to twenty inches of galena, brittle silver, and copper pyrites, in a quartz gangue, which assays twenty-two per cent copper, and eighty ounces silver per ton; developed by a shaft forty feet in depth, and a tunnel 175 feet in length.

**Anteros Mining Company (The).**—Incorporated under the laws of Iowa, November 12, 1880; capital stock $1,000,000, in 100,000 shares of $10 each; president, Jos. E. McClure, Alpine, Colo.; vice-president and general manager, H. S. Bridgman, Idaho Springs, Colo.; secretary and treasurer, H. C. Bostwick, Alpine, Colo.; assistant secretary, H. N. Bostwick, Keokuk, Ia.; offices Keokuk, Ia., and Alpine, Colo.; owns the Yacht, Tornado, Bronteus, Kenahiva, Lily of the West, and Bluebell lodes, 1500x300 feet each; situated in Chalk Creek Mining district, three miles from Alpine; veins all fissures, with crevices from two to six feet in width, containing quartz and galena, which assays forty per cent lead, and twenty-five ounces silver per ton; developed by tunnel 100 feet in length.

**Arkansas Queen.**—Charles Wallace, Salida, Colo., owner; claim 100x300 feet; situated three miles from Salida; located 1883; vein a fissure; ore, gold-bearing quartz; developed by a shaft fifteen feet in depth.

**Aztec and Montezuma.**—D. J. and H. J. Mawhester and B. F. Barber, both Tin Cup, Colo., owners; claims 1500x300 feet each; situated on National Mountain, Cottonwood Mining district; located 1882; fissure vein, with a crevice six feet wide, and a pay streak from two to twenty inches of galena and copper in a quartz gangue, which assays 185 ounces silver per ton; developed by tunnel forty feet in length.

**Baby Lee Group.**—Charles J. Lyndon, Alpine, Colo., and C. A. Clinton, St. Louis, Mo., owners; group comprises the Baby Lee, Prospect, Rock, Wild Warrior, and Gertrude lodes, 1500x300 feet each; situated on the east slope of Boulder Mountain, Chalk Creek Mining District, three miles from Alpine; located 1879; fissure veins, with crevices from three to six feet in width of quartz carrying galena and copper, which assays twelve per cent copper and thirty-five ounces silver per ton; developed by shafts, forty, fifty, and eighty-two feet in depth, respectively.

**Badger.**—Norman Martin, Garfield, Colo., owner; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located 1879; fissure vein, with a crevice two feet wide; ore, galena in a quartz gangue; assays twenty-five ounces silver per ton; developed by open cut fifteen feet in length.

**Baraconta.**—Claim 1500x300 feet; situated in Black Bear Gulch, La Plata or Clear Creek District; developments—one tunnel 100 feet long, exposing from ten to fifteen inches of mineral in a quartz gangue; assays from 25 to 500 ounces silver per ton; good wagon road to the property.

**Big Chief.**—W. D. Hunter, Chicago, H. D. Churchill, New York, and T. J. Moore and W. A. Lefevre, both Garfield, Colo., owners; claim 1500x300 feet; situated in Monarch Mining district; developments—one tunnel 155 feet in length, run for the development of the Rob Roy, Genii, and Big Chief lode claims.



**Black Hawk.**—J. A. J. Chapman, St. Elmo, Colo., owner; claim 1500x300 feet; situated on the east slope of Murphy Mountain, Chalk Creek Mining district; the vein has the characteristics of the Murphy, Pioneer, and others on Murphy Mountain, being a fissure in granitic formation, a tunnel 300 feet in length having exposed it from three to ten feet in width, with a pay streak varying from three to thirty-six inches, containing galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from $50 to $80 per ton in gold and silver.

**Black Prince Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in December, 1880; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president with manager, C. S. Schwartz; vice-president, H. C. Anderson; secretary and treasurer, D. J. Ezekiel; office 108 East Fifth street, Leadville; owns Black Prince, George Washington, Lulu E, New Discovery, and Last Hour, 1500x300 feet each; situated on the middle fork of the South Arkansas River, three miles from Garfield, Monarch district; located in 1880; veins all fissures, from five to twenty-five feet in width, of quartz carrying sulphides and carbonates of lead, which assays forty per cent lead, three-fourths ounce gold, and sixty ounces silver per ton in the Black Prince, while in the Last Hour some very high assays in gold have been obtained; improvements—hoisting apparatus and pumps, both driven by water-power.

**Black Swan.**—Patrick Griffin and W. W. Darling, Hancock, Colo., owners; claim 1500x300 feet; situated on Mineral Hill, Chalk Creek Mining district, one-half mile from Hancock; located in 1882; vein a fissure three feet wide, containing quartz and galena; developed by open cut fifteen feet in length.

**Bristol Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, S. S. Sindlinger; vice-president, George W. Parry; secretary, Chas. S. Libby; treasurer, D. C. Sindlinger; general manager, George W. Thompson—all Buena Vista, Colo.; owns the Bristol lode, 1500x300 feet; situated in Clear Creek Gulch, La Plata Mining district, twenty-eight miles from Buena Vista; located in 1880, and in process of patent; vein a fissure, with crevice twenty feet wide, and a pay streak from five to twenty inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, twenty-seven per cent lead and 107 ounces silver per ton; developed by a tunnel forty-five feet in length, and a cross-cut ten feet on the vein; output fifty tons of ore.

**Brunswick Mining and Milling Company.**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Waldo P. Johnson; vice-president and treasurer, Wm. M. Ladd—both St. Louis, Mo.; secretary, R. H. Musser, Brunswick, Mo.; offices No 21 North Main street, St. Louis, Mo., and Alpine, Colo.; general manager, Louis James, Alpine, Colo.; owns the Last Chance, Homestake, and Riggan lodes, 1500x300 feet each; situated on Boulder Mountain, Chalk Creek Mining district, four and one-half miles from Alpine; located in 1876; Riggan patented 1881; the others in process of patent; veins all fissure, with crevices from three to six feet in width of quartz, galena, and copper, which mill-runs, when sorted, one ounce gold and forty ounces silver per ton; developed by two shafts 50 and 155 feet in depth, respectively, and a cross-cut tunnel 212 feet in length, and drifts aggregating 100 feet in length; output 130 tons.

**Buck's Galena Group.**—Owners Chas. W. Buck, Garfield, Colo., and Henry L. Archer, Buena Vista, Colo.; group comprises the following lodes, viz.: Fourth of July, Victory, C. W. Buck, Ida Brown, Little Allie, Monster Fraud, and three others; claims 1500x300 feet each; situated on Mt. Ætna, Monarch Mining district, four miles from Hancock; located in 1879 and 1880; veins all fissures, with crevices from four to thirty feet in width containing quartz and galena, which assays forty per cent lead and 100 ounces silver per ton; developed by a shaft on each claim ten feet in depth, and a tunnel on the Fraud 250 feet in length.

**Buckeye.**—Owners P. C. Ellsworth, J. K. Vannatta, both Buena Vista, Colo., L. P. Rowley, Hancock, and D. F. Price, Columbus, Colo.; claim 1500x 300 feet; situated on Mineral Hill, Chalk Creek Mining district, one-half mile from Hancock; located in 1881, and in process of patent; vein a fissure, with a crevice four feet wide containing quartz and galena, which assays fifty per cent lead and forty ounces silver per ton; developed by a shaft eighty-five feet in depth, and a drift twenty-one feet in length.

**Buena Vista Sampling Works.**—Owners Frank W. Owens and Robert S. Towne, both Buena Vista, Colo.; works are situated at Buena Vista; main building 40x25 feet (frame), containing a Blake Crusher and one set of Cornish Rolls; worked by a twenty-horse-power engine; capacity for treating fifty tons of ore in twelve hours.

**Buffalo George.**—Owners Norman Martin and Wm. Isherwood, both Garfield, Colo.; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1880; vein a fissure, with a crevice four feet wide containing brittle and native silver in a quartz gangue, which assays 101 ounces silver per ton; developed by shaft nineteen feet in depth.

**Cambro Mining Company (The).**—Owns the Chicago, Cassie, and eight other lodes; claims 1500x300 feet each; situated at the head of Brown's Gulch, Chalk Creek Mining district; veins all fissures, inclosed in an eruptive prophyry formation, with crevices from six to eight feet in width containing carbonates of lead, galena, and iron pyrites scattered through a quartz gangue, which assays from thirty to seventy ounces silver per ton; Chicago is developed by shaft 100 feet in depth, and the Cassie by a tunnel on the vein 200 feet in length.

**Captain Jenks.**—Owned by Hampson & Townsend, Garfield, Colo.; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak of five inches of argentiferous galena in a quartz gangue, which assays twenty ounces silver per ton; developed by a shaft twenty feet in depth.

**Caskie Group.**—Owned by R. J. and Thomas Caskie and John Venner; group comprises the Keosaqua and Lehigh lodes; claims 1500x300 each; situated on Weldon Mountain, and the Vincennes on Franklin Mountain—all in Chalk Creek Mining district; veins all fissures, with crevices from four to five feet in width containing galena and copper pyrites in a quartz gangue, which assays from 50 to 200 ounces silver per ton; the Keosaqua and Lehigh are developed by two shafts forty-seven and sixty-five feet in depth, respectively, and the Vincennes by a shaft twenty feet in depth.

**Centennial.**—Owned by Mather, Quick, & Mocumber; claim situated on Pomeroy Mountain, Chalk Creek Mining district; vein has the same characteristics as the Michigan, but as yet has little developments.

**Chaffee County Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock



$1.000,000, in 100,000 shares of $10 each, non-assessable; president, A. Megee; secretary, B. L. Smith; treasurer, C. Cambern—all Rushville, Ind.; general manager, J. G. Megee, Garfield, Colo.; offices Rushville, Ind., and Garfield, Colo; owns the Merrimac lode, 1500x300 feet; situated on Monarch Mountain, Monarch Mining district; located in 1881; vein a fissure, with a crevice two feet wide, and a pay streak of eighteen inches; ore, argentiferous galena, chlorides, and carbonates, in a quartz gangue; mill-runs, when sorted, $70 per ton; developed by a tunnel 190 feet in length.

**Chalk Creek.**—J. P. Babbett, Chas. E. Saxton, both St. Elmo, Colo., V. C. Gumell, Buena Vista, Colo., and others, owners; leased to J. E. Cole, E. B. Wilson, E. A. Mattoon, and others, until August 15, 1883; claim 1500x300 feet; situated on Murphy Mountain, Chalk Creek Mining district, one and one-half miles from St. Elmo; located in 1881; vein a fissure, with a crevice five feet wide, and one pay streak of eighteen inches on the foot-wall, and another of six inches on the hanging-wall, of galena in a quartz gangue, which assays from thirty to sixty per cent lead, and sixty ounces silver per ton; developed by a shaft twenty feet in depth.

**Claremont.**—Mrs. E. Hampson, Garfield, Colo., owner; claim 1500x 300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a crevice five feet wide; ore—argentiferous galena and gray copper in a quartz gangue; assays $47 per ton; developed by a shaft twenty feet in depth.

**Chrysolite Tunnel Company.**—Owns the Chrysolite tunnel site, 3000x6 feet; situated at the foot of Chrysolite Mountain, Chalk Creek Mining district, on which a tunnel is driven 1,000 feet, cutting several lodes, the most important of which are the Maid of the Mist, Jim. G. Anderson, and Ute, containing large fissure veins of galena in a quartz gangue.

**Colorado Land and Mineral Company.**—Incorporated under the laws of New York in April, 1882; capital stock $3,000,000, in 600,000 shares of $5 each, non-assessable; president and managing director, Charles H. Collins, Leadville, Colo.; secretary and treasurer, Oliver F. Hungerford, New Hartford, Conn.; offices Wall street, New York, and 124 Harrison avenue, Leadville, Colo.; owns the Trafalgar lode, 1500x300 feet; situated one mile from Granite, Granite Mining district; located in 1879, and patented in 1882; ore, argentiferous galena in a quartz gangue, which mill-runs, when sorted, sixty per cent lead and thirty ounces silver per ton; developed by a shaft fifty feet in depth.

**Colter Sharp.**—R. J. Jamison and C. J. Edmonds, both Meily, and Herbert Gaston, Leadville, owners; claim 1500x300 feet; situated on Central Mountain, Red Mountain district; located in October, 1881; ore body appears to be a deposit of quartz and iron pyrites, which assays $15 gold and six ounces silver per ton; developments—two tunnels thirty-nine and fifty-two feet long, respectively, both showing ore.

**Columbus and Sun Prairie Mining Company.**—Incorporated under the laws of Wisconsin in March, 1880; capital stock $25,000, in 250 shares of $100 each, non-assessable; president, M. Adams; secretary, George Bresee; treasurer, Wm. Drake—all Columbus, Wisconsin; general manager, G. M. Bowen, Alpine, Colo; owns the following lodes claims, viz.: Richmond and Iron, 1500x300 feet each, and Grant Tunnel Site, 3000x6 feet; situated on Princeton, Boulder, and Mammae Mountains, Chalk Creek Mining district, from one and one-half to two and one-half miles from Alpine; located in 1880; veins all fissures, with crevices from four to twelve feet in width, and pay streaks from six to twenty inches of quartz carrying galena and

copper, which mill-runs, when sorted, one-half ounce gold and twenty-three ounces of silver per ton; a tunnel is driven on the tunnel-site fifty feet long, which in its progress cuts five veins, upon which claims 1500x300 feet each have been located; Richmond developed by a cross-cut fifty-five feet, a drift fourteen feet in length, and Iron by a shaft sixty feet in depth.

**Columbus Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $3,000,000, in 300,000 shares of $10 each, non-assesable; president, Hugh J. Jewett; vice-president, Horace A. Hurlbut; secretary and treasurer, James C. Spencer—all New York City; superintendent, George K. Sabin, Columbus, Colo.; offices No. 2 Wall Street, New York, and Columbus, Colo.; owns the Columbus, Yale, Patch, Iron, and Monitor, 1500x300 feet each, and the Erie Placer, all situated on Columbus Mountain, two miles from Garfield and eight miles from Maysville, Monarch district; Columbus, Iron, and Monitor patented, and the others in process of patenting; veins all fissures from two to six feet in width, with pay streaks from five to forty inches, in which the ore body near the surface was composed of carbonates and oxides of lead, carrying silver in the form of chloride, with some silver glance and native silver, but in the lower workings it has assumed more of the sulphide structure, with a gangue matter of quartz, which mills, when sorted, from fifty to seventy-five ounces silver per ton; the developments consisting of one shaft sixty feet in depth, and two levels 460 and 540 feet in length, respectively, together with considerable winzes, up-raises, and stopes; improvements—ore-houses, boarding-houses, etc., and a Halliday Wire Tramway 5,000 feet in length, connecting the mine with the Company's mill, the latter built by Fraser & Chalmers, and containing White & Howell's Cylindrical Roasters, one Blake Crusher, and twenty Stamps with Amalgamating-pans and Settlers, and a capacity for the reduction of thirty-five tons of ore per day.

**Columbus No. 1 Group.**—P. C. Ellsworth, J. K. Vannatta, W. H. Miller, all Buena Vista, Colo., Charles F. Buck, Columbus, Colo., and J. S. Painter, Salida, Colo., owners; group comprises the Columbus No. 1 East, Columbus No. 1 West, Alps, Crossing, Ike Morris, Andrew Jackson, and other lodes, composing sixty-five acres of ground, and situated adjacent to and adjoining the Columbus Mining Company's property, at Columbus, Monarch Mining district; located 1879; veins all fissures, with crevices from three to six feet in width, containing carbonates and oxides of lead, carrying silver in the form of chlorides, which assay from fifty to seventy-five ounces of silver per ton; developed by shafts, one in each lode, from ten to sixty feet in depth.

**Continental.**—J. E. McClure, H. C. Bostwick, and Henry Campbell, all Alpine, Colo., owners; claim 1500x300 feet; situated on Mammae Mountain, Chalk Creek Mining district, one and one-half miles from Alpine; located 1874; fissure vein, with a crevice from four to eight feet in width of quartz carrying galena, gray copper, and iron pyrites, which mill-runs, when sorted, from $100 to $400 per ton in gold and silver; developed by shaft forty-five feet in depth, a cross-cut twenty-five feet in length, and a drift 225 feet long.

**Cora Crena and Red Cloud.**—H. P. Baker and Henry O'Neil, both Alpine, Colo., owners; claims 1500x300 feet each; situated on Crysolite Mountain, Chalk Creek Mining district; located 1878; fissure veins, with crevices from two to four feet wide, and pay streaks of about six inches, which assay sixty-two ounces silver per ton; developed by two shafts twenty-five and fifty-two feet in depth, respectively, and a drift thirty-seven feet in length.

**Cumberland.**—J. C. Gilray and others, Buena Vista, Colo., owners; claim 1500x300 feet; situated on Mount Princeton, Chalk Creek Mining district, sixteen miles from Buena Vista; located 1882; fissure vein, with a crevice four feet wide, and a pay streak from four to sixteen inches of quartz and galena, which assays 160 ounces silver per ton; developed by an open cut fifteen feet in length, with a ten-foot face.



**Dan Allen.**—Uriah Taylor and Adam Kiefner, both Hancock, Colo., O. E. Henry, Silver Cliff, and Wm. Trusdale, Chicago, Ill., owners; claim 1500x300 feet; situated on Mineral Hill, Chalk Creek Mining district, three-fourths mile from Hancock; located 1879; fissure vein of quartz and galena, which assays from fifteen to sixty ounces silver per ton; developed by an open cut forty feet in length, and shaft ten feet in depth.

**Dandy Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Eugene F. Williams, St. Louis, Mo.; vice president, Chas. M. Sharpe, Buena Vista, Col.; secretary, S. J. Pettit; treasurer, A. P. Bush—both St. Louis, Mo.; general manager, James Fleetford, Buena Vista, Colo.; offices 517 Chestnut street, St. Louis, Mo., and Buena Vista, Colo.; owns the Dandy and Encyclopedia lodes, 1500x300 feet each; situated on east slope of Mount Princeton, Cottonwood Mining district, ten miles from Buena Vista; located 1880, and in process of patent; fissure veins, with crevices four and five feet in width, respectively, with pay streaks from eight to thirty inches; the Dandy having five veins and Encyclopedia four veins of galena and sulphurets in a quartz gangue, which assays eleven per cent lead and twenty-five ounces silver per ton; the Dandy is developed by shaft 150 feet in depth, and a tunnel 200 feet in length.

**Daniel Webster.**—Hampson & Townsend, Garfield, Colo., owners; claim 1500x300 feet; situated in Monarch Mining district, near Garfield; located 1881; fissure vein, with a crevice thirteen feet wide; ore, argentiferous galena; assays thirty-one ounces silver per ton; developed by two shafts eighteen feet in depth each.

**Diamond Queen and Forest Queen.**—A. L. Dodge and others, owners; claims 1500x300 feet each; situated on Murphy and Chrysolite Mountains, Chalk Creek Mining district, one mile from St. Elmo; located 1881; fissure veins, with crevices five feet wide of quartz carrying galena and copper pyrites, which assay in gold and silver from $60 to $200 per ton; developed by tunnel 110 feet in length, and a shaft 22 feet in depth.

**Diamond Queen Silver Mining and Milling Company (The).**—Incorporated under the laws of Colorado in July, 1881; capital stock $500,000, in 10,000 shares of $50 each, non-assessable; president, J. Nesbitt; secretary and treasurer, Edward Whittaker—both St. Louis, Mo., superintendent, J. T. Redmon, Alpine, Colo.; offices corner Third and Pine streets, St. Louis, Mo., and Alpine, Colo.; owns the Diamond Queen, Betsy Link, Alpine, Ne Plus Ultra, and Crown Prince lodes, 1500x300 feet each; situated on Boulder Mountain—the Silver Queen lode on Mammae Mountain, the Pride of Norway lode on Crysolite Mountain, the St. Louis and Unknown Star lodes on Pomeroy Gulch, and the War Eagle lode on Princeton Mountain, 1500x300 feet each, all in Chalk Creek Mining district, near Alpine and St. Elmo; located 1878 and 1879, patents in process; veins all fissures, with crevices from two to ten feet in width of quartz carrying galena and copper, which mill-runs, when sorted, one-half ounce gold and fifty ounces silver per ton; Diamond Queen developed by a shaft 157 feet in depth, and two levels aggregating sixty feet, Alpine by tunnel 112 feet in length, Betsy Link by shaft 88 feet in depth, Silver Queen by two drifts 175 and 212 feet in length, respectively, Pride of Norway by drift 237 feet in length, and War Eagle by tunnel 177 feet in length.

**Diamond Tunnel.**—J. T. Robertson, St. Elmo, Colo., G. M. Bowen, Alpine, Ira H. Ford, Columbus, Wis., owners; claim 3000x6 feet; situated on Chrysolite Mountain, and in Grizzly Gulch, Chalk Creek Mining district, four miles from St. Elmo; located in 1880; the tunnel is now driven 165 feet, opening up two veins, on which have been located two claims, viz.: the Elephant and Red Lion, 1500x300 feet each, both fissures from two to four feet in width containing galena and quartz, which assays from one-quarter to one-half ounce gold and from seven to twenty ounces silver per ton; each developed by drifts on the veins.

**Disraeli.**—I. N. Barrett and A. D. Hinkle, both Buena Vista, Colo., owners; claim 1500x300 feet; situated at South Cottonwood, Cottonwood Mining district, ten miles from Buena Vista.; located in 1882; fissure vein, with a crevice three feet wide, and a pay streak of eighteen inches of galena in a quartz gangue, which mill-runs, when sorted, forty per cent lead and twenty ounces silver per ton; developed by tunnel twenty-five feet in length on the vein.

**Easter.**—I. N. Barrett, A. D. Hinkle, Thomas Freeman, and Samuel Sindlinger, all Buena Vista, Colo., owners; claim 1500x300 feet; situated at North Cottonwood, Cottonwood Mining district, eight miles from Buena Vista; located in 1882; fissure vein, with a crevice four feet wide of quartz containing galena and sulphurets, which assays 248 ounces silver per ton; developed by shaft fifteen feet in depth.

**Eclipse Mining Company (The).**—President, S. G. Stein, Muscatine, Iowa; secretary, A. M. Bernard, Chicago, Ill.; general manager, C. H. Abbott, Chaffee, Colo.; offices Chicago, Ill., and Chaffee, Colo.; owns the Eclipse lode, 1500x300 feet; situated in Monarch Mining district, near Chaffee; located in 1878, and patented; fissure vein, with a crevice four and one-half feet wide; ore—argentiferous galena and carbonates in a quartz gangue, which mill-runs, when sorted, seventy per cent lead and sixty ounces silver per ton; developed by a shaft 160 feet in depth, and two tunnels 120 and 250 feet in length, respectively.

**Edith and Imogene.**—C. E. Parland, C M. Weeks, C. A. Smith, Andrew Lejune, all Hancock, Colo., Samuel Goodrich, Denver, Colo., and B. T. O. Hubbard, Monmouth, Ill., owners; claims contain fifteen acres; situated on the west slope of Pomeroy Mountain, Chalk Creek Mining district, one-half mile from Hancock, Colo.; located in 1880, and in process of patent; fissure veins, with crevices from six to seven feet in width of quartz carrying galena, which assays 300 ounces silver per ton; developed by a shaft forty feet in depth, and incline fifteen feet in length.

**El Dorado Mining Company (The).**—President, George A. Byrns, Cooperstown, Ill.; secretary, A. W. Root; superintendent, Hiram A. Henry—both St. Elmo, Colo.; owns ten claims; situated on Chrysolite Mountain, and in Grizzly Gulch, Chalk Creek Mining district; the veins are all fissures, with crevices from three to six feet in width, containing a heavy galena in a quartz gangue; developments consist principally of assessment work.

**El Moro Mining Company (The).**—Incorporated under the laws of Colorado in September, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; general manager, A. J. Byrnes, St. Elmo, Colo.; owns the El Moro lode, 1500x300 feet; situated on the north end of Chrysolite Mountain, Chalk Creek Mining district, at town of St. Elmo; located in 1880; fissure vein twelve feet wide, with a mineral streak of twelve inches of quartz and galena, which assays thirty-five per cent lead and sixteen ounces silver per ton; developed by a shaft seventy-five feet in depth.



**Ella.**—J. M. Bonney and M. R. Littlefield, owners; claim 1500x300 feet; situated on Mammae Mountain, near Chalk Creek, in the Chalk Creek Mining district; vein a fissure, with a crevice six feet wide, and a pay streak from three to twenty inches of galena in a quartz gangue, which mill-runs, when sorted, seventy-five ounces silver per ton; developed by a drift on the vein 150 feet in length.

**Emma.**—J. W. Faxon, W. H. Faxon, both Boston, Mass., D. H. Gile, Asa Wooster, both Chicago, Ills., Chas. Spencer, Chas. Kingburg, both Leadville, Colo., owners; claim 1500x300 feet; situated in Lost Cañon, Granite Mining district, six miles west of Granite; located in 1878; contact vein, with a crevice from three to seven feet wide of quartz carrying galena and gold, which assays twenty per cent lead, from one to four ounces gold and twenty ounces silver per ton; developed by tunnel 200 feet in length.

**Emma Spratley.**—Dunn & Zillhaver, Las Vegas, Texas, owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; fissure vein, with a crevice four feet wide; ore, native and buttle silver, in a quartz gangue; assays 300 ounces silver per ton; developed by an open cut thirty feet in length, and a tunnel twelve feet long.

**Emory.**—Owners H. R. Johnson and Buckey Bros., all Alpine, Colo., and John Exton, Wichita, Kas.; claim 1500x300 feet; situated on Princeton Mountain, Chalk Creek Mining district; vein a fissure, with a crevice four feet wide, and a pay streak varying from six to twenty inches of galena in a quartz gangue, which assays forty per cent lead and thirty ounces silver per ton; developed by a tunnel 130 feet in length, and a shaft twenty feet in depth.

**Empire.**—Owned by F. K. Sabin, Columbus, Colo.; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1882; vein a fissure, with a crevice four feet wide of argentiferous galena in a quartz gangue, which assays sixty-five ounces silver per ton; developed by a shaft 100 feet in depth.

**Equinox and Daniel Mahael.**—Owned by John T. Redmon, Alpine, Colo.; claims 1500x300 feet each; situated on Sugar Loaf Mountain, in Maggie May Gulch, Chalk Creek Mining district, three miles from Alpine; located in 1880, and in process of patent; contact veins, with crevices four and thirty feet wide, respectively, and pay streaks of about eight inches of quartz carrying iron and galena, which mill-runs, when sorted, one and one-half ounces gold and twenty-seven ounces silver per ton; developed by a tunnel seventy-five feet in length, and an inclined shaft forty-five feet in depth; output thirty tons.

**Fairplay.**—Owned by Boone Bros., Chaffee, Colo.; claim 1500x300 feet; situated in Monarch Mining district, near Chaffee; located in 1878; vein a fissure, with a crevice four feet wide of carbonates carrying silver, which assays eighty ounces silver per ton; developed by an inclined tunnel 220 feet in length.

**Fairview.**—Owned by Brown & Jocky; claim 1500x300 feet; situated in Poplar Gulch, Chalk Creek Mining district; contains three parallel veins, with crevices from three to five feet in width, and pay streaks from three to twelve inches of galena in a quartz gangue, which assays thirty per cent lead and from twenty to fifty ounces silver per ton; developed by three tunnels from thirty to seventy feet in length.

**Falco Silver Mining Company (The).**—Incorporated under the laws of New York in April, 1881; capital stock $1,000,000, in 200,-

000 shares of $5 each, non-assessable; president, B. R. Western; vice-president, H. Millard; secretary and treasurer, H. Courteille—all New York; general manager, Achille Falco, Pitkin, Colo.; offices 8 Broad street, New York, and Pitkin, Colo.; owns the Black Crook lode, 1500x300 feet; situated on Boulder Mountain, Chalk Creek Mining district, five miles from Alpine; located in 1879, and patented; vein a fissure, with a crevice twelve feet wide of quartz carrying iron and copper pyrites and galena, which mill-runs, when sorted, twenty-six per cent copper per ton; developed by shaft 222 feet in depth, and two drifts aggregating seventy feet in length.

**Fannie, Emily, and Hattie.**—Owned by F. A. La Grave and Montee Bros.; claims 1500x300 feet each; situated on Princeton Mountain, Chalk Creek Mining district; vein a fissure, with a crevice three feet in width, through the vein-matter of which is scattered argentiferous galena, assaying seventy-five ounces silver per ton; developed by a cross-cut tunnel 175 feet in length, which cuts the veins at a depth of 150 feet from the surface, and a shaft in the Fannie thirty feet in depth.

**Flora Belle.**—J. R. Emerson, F. Shodl, J. Drach, all Hancock, Colo., P. D. Ridenour and H. W. Baker, both Kansas City, Mo., owners; claim 1500x300 feet; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, three-fourths of a mile from Hancock; located in 1881, and patented 1882; vein a fissure, with a crevice six feet wide of quartz, with galena and iron and copper pyrites, which mill-runs, when sorted, thirty per cent lead and forty-two ounces silver per ton; developed by shaft sixty-five feet in depth.

**Florence and Edith No. 2.**—A. J. Byrnes and others, owners; claims 1500x300 feet each; situated on Pomeroy Mountain, Chalk Creek Mining district; veins both fissures, with crevices from three to six feet in width of galena and iron pyrites in a quartz gangue, which assays from one to two ounces gold and fifty ounces silver per ton; developments are slight.

**Forest Queen.**—A. L. Dodge, Pitkin, Colo., owner; claim 1500x300 feet; situated on Murphy and Chrysolite Mountains, Chalk Creek Mining district, one mile from St. Elmo; located in 1881; vein a fissure, with a crevice five feet wide, and a pay streak from six to fifteen inches of galena, gray copper, and copper pyrites, in a quartz gangue; developed by assessment shafts.

**Foster Ore and Metal Works.**—Charles C. Foster, Boston, Mass., owner; works situated at Alpine, and containing Rolls, Crushers, Roasting Furnaces, and Smelting Furnace, and have a capacity for smelting thirty tons of ore in twenty-four hours.

**Free Republic.**—1500x300 feet; situated in Black Bear Gulch, La Plata, or Clear Creek, district; located July 1879; developments—one tunnel eighty feet long on the vein, showing thirty inches of galena and gray copper in a quartz gangue in the breast, on which assays have been obtained from 10 to 100 ounces silver per ton; the tunnel for a distance of forty feet was running through a large horse, but the pay vein was afterwards struck and proved to be very wide.

**French.**—French and Son, Garfield, Colo., owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a pay streak of six inches in width; ore—gray copper and gold quartz, with considerable gangue matter; assays 120 ounces silver per ton; developed by a tunnel 120 feet in length.

**Gaff Mining Company (The).**—Owns the Cache Creek Placer Mine, consisting of about 1,000 acres; situated on Cache Creek, Hope district;



developments consisting of a bed-rock flume nearly two miles in length; this is the principal placer property in the district.

**George Washington.**—Swartz & Co., owners; claim 1500x300 feet; situated in Monarch Mining district, near Garfield; located in 1879; vein a fissure, with a crevice three feet wide; ore—argentiferous galena and sulphurets in a quartz gangue, which mill-runs, when sorted, sixty ounces silver per ton; developed by shaft fifty feet in depth.

**Germania.**—M. J. Magee and Harold Goodwin, both Hancock, Colo., owners; claim 1500x300 feet; situated on Pomeroy Mountain, Chalk Creek Mining district, three-fourths mile from Hancock; located in 1880, and patented; vein a fissure, with a crevice seven feet wide, and a pay streak from six to twenty inches of quartz, galena, and sulphurets, which mill-runs, when sorted, two-tenths ounce gold and thirty-five ounces silver per ton; developed by two shafts thirty and sixty feet in depth, respectively.

**Gladstone.**—E. C. Hurd, Pueblo, James Byrns and E. L. Baker, both Alpine, Colo., owners; claim 1500x300 feet; situated in Middle Cottonwood, Cottonwood Mining district, thirteen miles from Buena Vista; located in 1880, and patented in 1882; vein a fissure, with a crevice six feet wide, and a pay streak from eight to eighteen inches of galena and sulphurets, which mill-runs, when sorted, thirty per cent lead and from 80 to 125 ounces silver per ton; developed by a tunnel 110 feet in length, winze fifty feet in depth, and drifts and levels aggregating 370 feet; output sixty tons; present shipments two tons per day.

**Godfrey Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 50,000 shares of $20 each, non-assessable; president, George M. Nobles, Topeka, Kas.; vice-president and general manager, C. R. Godfrey; offices Pueblo and Boulder, Colo.; owns the Kansas and Mammoth lodes, 1500x300 feet each; situated on Boulder Mountain, Chalk Creek Mining district, three miles from Alpine; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from six to twenty inches of galena and copper in a quartz gangue, which assays 193 ounces silver and one and nine-tenths ounces gold per ton; developed by two tunnels aggregating ninety feet in length.

Also owns the Friendship, Arctic, Rough, and Mountain Top lodes, 1500 x300 feet each; situated in Deer Cañon, Chalk Creek Mining district; veins all fissures, with crevices from one to six feet in width of quartz carrying galena and copper; developed by tunnel twenty feet in length on each claim.

**Gold Stone.**—Owned by Myers Bros. and John Warner; claim 1500 x300 feet; situated on Franklin Mountain, Chalk Creek Mining district; containing two fissure veins, with crevices four and five feet in width, respectively; nature of ore—galena and iron pyrites in a quartz gangue, which assays thirty-five ounces silver and one-fourth ounce of gold per ton; the first vein is intersected by a tunnel 320 feet in length, which cuts it at a depth of 100 feet from the surface, and the second vein is developed by a shaft sixty feet in depth.

**Golden Chain Group.**—L. F. McAleer, Youngstown, Ohio, owner, Geo. W. McAleer, Hancock, Colo., manager; group comprises the Golden Chain, Philadelphia, and Susie McAleer lodes, 1500x300 feet each; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, three-fourths mile from Hancock; located 1880, and in process of patent; veins all fissures, with crevices from three to five feet in width of quartz carrying pockets of galena and sulphurets, which assay 182 ounces silver and one and

one-half ounces gold per ton; developed by two shafts ten and thirty-three feet in depth, respectively, and tunnel 105 feet in length.

**Golden Eagle.**—Thomas & Skinner, Garfield, owners; claim 1500x 300 feet; situated in Camp Summit, Monarch Mining district; located 1872; vein a fissure, with a crevice three feet wide; ore, argentiferous galena in a quartz gangue; assays thirty ounces silver per ton; developed by a shaft fifteen feet in depth.

**Gospel and Montank.**—John Abbett, Robt. Hughes, and John Lynch, all Buena Vista, Colo., owners; claims 1500x300 feet; situated at Middle Cottonwood, Cottonwood Mining district, twelve miles from Buena Vista; located in June, 1882; contact veins, with crevices from six to nine feet wide, and pay streaks from six to thirty inches of galena and sulphurets in a quartz gangue, which assays from 50 to 500 ounces silver per ton; developed by tunnel 125 feet in length.

**Grace Greenwood.**—Owned by Stark, Wilson & Co.; claim 1500x 300 feet; situated on Pomeroy Mountain, Chalk Creek Mining district; vein a fissure, with a crevice varying from four to twenty feet in width, through which is interspersed rich streaks of galena and sulphurets, which assay from one to three ounces gold and from forty to sixty ounces silver per ton; developed by a tunnel 165 feet in length.

**Grand Duke.**—J. H. Griffith, Henry Yoder, N. Ray, and E. E. Thomas, owners; claim 1500x300 feet; situated at the head of Poplar Gulch, in Chalk Creek Mining district; vein a fissure, with a crevice forty feet in width, with five feet of talc on the foot-wall, mineralized with iron, copper pyrites, and galena, and a body of similar talc five feet wide on the hanging-wall, which assays from ten ounces to twenty ounces silver per ton; developed by a cross-cut eighty-eight feet in length.

**Grand Prize.**—Nelson Johnson and Jacob Ellison, Tin Cup and Boulder, Colo., owners; claim 1500x300 feet; situated one mile east of Castle Creek, Ashcroft Mining district; located 1880; contact vein, with a crevice from three to four feet wide of iron and gray copper in an abundant gangue, which assays from 200 to 600 ounces silver per ton; developed by shaft fifty feet in depth.

**Grand Union Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; president, Dr. J. T. Hampton; secretary and treasurer, Andrew Hazlet—both Philadelphia, Pa.; general manager, Henry S. Acter, Buena Vista, Colo.; offices 202 Walnut Place, Philadelphia, Pa., and at Buena Vista, Colo.; owns the following lodes: Monroe, Adams, Jefferson, Madison, and Curtin, 1500x300 feet each; situated on Middle Cottonwood, Cottonwood Mining district, ten miles from Buena Vista; located 1880; fissure veins, with crevices from two to four feet in width of quartz and galena, which assay thirty-five per cent lead and seventy ounces of silver per ton; Monroe developed by shaft 125 feet in depth and tunnel 100 feet in length; Adams by tunnel 70 feet in length, and others by the assessment work.

**Grizzly Gulch and Monarch Mining Company (The).**—Incorporated under the laws of Colorado; president, N. Gleason; superintendent, W. B. Biddle; owns the Marquis of Lorne and its extension; also several other claims; situated on the divide, between Grizzly Gulch and the gulch formed by the waters of the north branch of the Arkansas, Chalk Creek Mining district; veins have crevices from two to six feet in width, through the vein-matter of which is scattered galena and iron pyrites, which assay from one to two ounces gold and from 50 to 100 ounces silver per ton; developed by two shafts sixty and ninety feet in depth, respectively.



**Gulch.**—A. Walton, Garfield, Colo., owner; claim 1500x300 feet; situated in Monarch Mining district; located 1878; fissure vein, with a crevice three feet wide; ore—argentiferous galena and silver glance in a quartz gangue; assays from 100 to 200 ounces silver per ton; developed by shaft sixty-five feet in depth, and tunnel ninety feet in length.

**Half Moon.**—Wm. Laughlin, Garfield, Colo., owner; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district, near Garfield; located 1879; fissure vein, with a crevice five feet wide; ore, quartz carrying gold; mill-runs $14 per ton; developed by shaft thirty-six feet in depth.

**Herald.**—Owners John McKinley, H. Hiatt, Pierce Myers, Harry Smith, and others, Buena Vista, Colo.; claim 1500x300 feet; situated on a spur of Mt. Princeton, Chalk Creek Mining district, three miles from Alpine; located in 1879; vein a fissure, with a crevice eight feet wide, and a pay streak varying from three to twenty inches of quartz and galena, which assays forty per cent lead and sixty ounces silver per ton; developed by a shaft twenty feet in depth, an open cut twenty-five feet in length, and a tunnel 100 feet long; output twenty-five tons of ore.

**Herman.**—Owners Thomas Henline, N. Ray, and Edward Starks; claim 1500x300 feet; situated at the head of Poplar Gulch, Chalk Creek Mining district, two and one-half miles from St. Elmo; vein a fissure, with a crevice ten feet in width, and a pay streak from eight to twenty inches in width containing galena and sulphurets in a quartz gangue, which assays from 20 to 600 ounces silver per ton; developed by a shaft seventy-five feet in depth.

**Herrick Mining Company (The).**—Incorporated in 1880; capital stock $35,000, in 35,000 shares of $1 each, non-assessable; president, S. S. Hart; vice-president, Lucius Rogers; secretary, Wm. S. Black; treasurer, Benjamin M. Nead—all Harrisburgh, Pa.; general manager, Henry S. Acker, Buena Vista, Colo.; offices No. 1 East Market Square, Harrisburgh, Pa., and Buena Vista, Colo.; owns the Kerr and Herrick lodes, 1500x300 feet each; situated at South Cottonwood, in Cottonwood Mining district, ten miles from Buena Vista; located in 1880; Kerr patented, and Herrick in process; veins both fissures, with crevices from ten to forty feet in width, and pay streaks from ten to fifteen inches of galena in a quartz gangue, which mill-runs, when sorted, forty per cent lead and twenty-five ounces silver per ton; developed by a cross-cut tunnel 174 feet long, cutting the Kerr vein, and 185 feet of drifting on the vein; Herrick by a tunnel sixty-five feet in length; output 200 tons.

Also owns the E. V. Everhart lode; claim 1500x300 feet; situated at the junction of Four Mile Run and Trout Creek, Four Mile Mining district, seven miles from Buena Vista; located in 1880; vein a fissure, with a crevice two feet wide of quartz carrying gold, which assays one and one-half ounces gold per ton; developed by a shaft sixty feet in depth.

**Hidden Treasure Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in September, 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, A. S. Austin, Wichita, Kas.; vice-president, E. A. Mattoon; secretary, J. E. Cole; treasurer, A. H. Waite—all Buena Vista, Colo.; owns the Hidden Treasure and Comstock lodes; claims 1500x300 feet each; situated at North Cottonwood, Cottonwood Mining district, twelve miles from Buena Vista; located in 1881; veins both fissures, with crevices from two to four feet wide of quartz and galena, which assays two and one-half ounces gold and 100 ounces silver per ton; developed by a tunnel ninety feet in length.

**High Pressure Group.**—H. P. and W. C. Shinn, John Corcoran, T. W. Thomas, all Hancock, Colo., and others, owners; group comprises High

Pressure, Dodge City, Cleopatra, and Tivoli lodes, 1500x300 feet each; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district; located in 1880, and Cleopatra in process of patent; veins all fissures, with crevices from one to four feet in width of quartz, galena, and copper, which assays three-eighths ounces gold and eight ounces silver per ton; Cleopatra developed by tunnel twenty feet in length and open cut 200 feet in length, Dodge City by an open cut 100 feet in length, and High Pressure by a shaft nineteen feet in depth.

**Highland Chief.**—W. E. Reid, Norman Martin, J. S. Williams, all Garfield, Colo., owners; claim 1500x300 feet; situated in Monarch Mining district; located in 1879; vein a fissure, with a pay streak fourteen inches wide; ore, argentiferous galena in a quartz gangue; assays from fifty-four to sixty-five ounces silver per ton; developed by a shaft thirty-five feet in depth.

**Highland Chief No. 2.**—W. E. Reid, C. Ditmer, Norman Martin, and J. Farrell, all Garfield, Colo., owners; claim 1500x300 feet; situated in the Monarch Mining district, near Garfield; vein a fissure, with a crevice eight feet wide; ore, argentiferous galena in a quartz gangue; assays from twenty-eight to thirty ounces silver per ton; developed by a shaft twenty-five feet in depth.

**Hortense Gold and Silver Mining Company (The).** Incorporated under the laws of New York in 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Robert Sewell; vice-president, Chas. H. Raymond; treasurer, G. P. Sheldon—all New York City; general manager, Eugene H. Teats, Buena Vista, Colo.; offices Buena Vista, Colo., and 206 Broadway, New York City; owns the Hortense and Henry Altman lodes, 1500x300 feet each; situated on Mount Princeton, Cottonwood Mining district, ten miles from Buena Vista; both claims patented; veins both fissures, with crevices from three to six feet in width of quartz carrying pockets of galena and sulphurets, which mill-runs, when sorted, from 50 to 150 ounces silver and one-half ounce gold per ton; developed by four inclines, 100, 500, 600, and 700 feet in length, respectively, a tunnel 700 feet in length, two winzes 300 and 400 feet in depth, respectively; output twenty tons per day.

**Ike Morris.**—T. J. Hampson, C. W. Buck, both Garfield, Colo., and H. Zillhaver, Las Vegas, Texas, owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district, near Garfield; located in 1879; contains four fissure veins, with crevices about four feet each; ore, argentiferous galena and brittle silver in a quartz gangue; assays eighty-five ounces silver per ton; developed by three shafts fifteen feet in depth each.

**Illinois Silver Mining Company (The).**—Incorporated under the laws of Illinois, in January, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; offices Monmouth, Ill., and Hancock, Colo.; agent, J. M. Harvey, Hancock, Colo.; owns the Lulu May lode, 1500x300 feet; situated on Chrysolite Mountain, Chalk Creek Mining district, two miles from Hancock; located in 1880; vein a fissure, with a crevice six feet wide of quartz and galena, which assays from seventeen to twenty-seven ounces silver and two ounces gold per ton; developed by shaft forty-two feet in depth, and drifts aggregating twenty-five feet in length.

Also owns the Sarah, lode 1500x300 feet; situated on the west slope of Pomeroy Mountain, Chalk Creek Mining district, half mile from Hancock; located August 9, 1880, and in process of patent; fissure vein, with a crevice four and a half feet wide, and a pay streak from six to twenty inches of quartz and galena, which assays from twenty-five to eighty ounces silver per ton; developed by tunnel 175 feet in length, and shaft twenty-seven feet in depth.



**Imperial.**—F. Shelton, L. P. Rowley, and E. Darling, all Hancock, Colo., owners; claim 1500x300 feet; situated on the west slope of Pomeroy Mountain, Chalk Creek Mining district, at Hancock; located in 1882; fissure vein, with a crevice four feet wide containing quartz, with galena scattered through it, assaying twenty ounces silver per ton; developed by shaft sixteen feet in depth.

**Iowa Group.**—W. H. Breezley, J. E. Good, and W. E. Seal, all Hancock, Colo., owners; group comprises the Monitor, Smuggler, Mountain Quail, Hancock, Eugene, and Dolly Varden lodes, 1500x300 feet each; situated at head of Chalk Creek, Chalk Creek Mining district one and a half miles from Hancock; located in 1880; fissure veins, with crevices from four to twelve feet wide of quartz and galena, which assay from fourteen to sixty-four ounces silver per ton; developed by three tunnels, twenty, twenty five, and forty feet in length, respectively, two shafts twenty-five feet each in depth, and two open cuts forty and fifty feet in length, respectively.

**Irish American.**—E. Lewis, A. C. Holt, J. C. Sullivan, and John Rowan, all Buena Vista, Colo., owners; claim 1500x300 feet; situated on Mt. Princeton, Cottonwood Mining district, two miles from Buena Vista; located in 1880; fissure vein, with a crevice from three to four feet wide, and a pay streak from four to eighteen inches of quartz and galena, which assays thirty per cent lead and sixty ounces silver per ton; developed by a shaft thirty feet in depth and a tunnel twenty feet in length.

**Irma.**—Claim 1500x300 feet; situated on the north side of Princeton Mountain, in Chalk Creek Mining district; the vein is a fissure, between granite walls, the crevice being from four to eight feet wide, containing galena in a quartz gangue, which mills, when sorted, thirty-five ounces silver per ton; developments consist of a shaft 112 feet in depth, a cross-cut fifty-four feet in length, and an incline on the vein forty-five feet in length.

**Iron Chest.**—Davies & Hudgins, St. Louis, Mo., owners; claim 1500 x300 feet; situated on Murphy Hill, Chalk Creek Mining district; vein a fissure, with a crevice from three to eight feet in width, and a pay streak varying in width considerably, composed of galena, iron pyrites, and sulphurets, in a quartz gangue, of the same character as the Murphy- which mill-runs, when sorted, from $60 to $90 per ton; it is developed by a tunnel 300 feet in length on the vein.

**Iron Chief.**—B. J. Dodge, Buena Vista, Colo., Daniel Loomis and Arthur Adair, both Hancock, Colo., owners; A. L. Dodge, Pitkin, Colo., manager; claim 1500x800 feet; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, three-fourths mile from Hancock; located in 1881; vein a fissure, with a crevice seven feet wide, and a pay streak from three to eleven inches of galena and hematite iron, which assays fifty per cent iron and eight ounces silver per ton; developed by shaft fourteen feet in depth.

**Iron Crown Mining Company (The).**—Incorporated under the laws of Colorado in November, 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, W. W. Tweed; secretary, J. M. Gibbs—both Colorado Springs; treasurer, Van H. Brooks, Leadville; vice-president, C. S. Schwartz; manager, H. J. Schnell—both Columbus, Colo.; owns four full claims, and one fractional 1500x100 feet, viz.: Sulphuret, Central, Iron Crown, Frank Tweed, and General Grant; situated on Mount Keys and Iron Mountain, one and one-fourth miles from Columbus, Monarch district; located in 1880; veins all fissures, containing quartz, galena, and

some sulphurets; developments—seven tunnels aggregating 200 feet in length and three shafts aggregating fifty feet in depth.

**Iron Mask.**—Norman Martin, Garfield, Colo., owner; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a crevice four feet wide; ore—argentiferous galena and gray copper in a quartz gangue; mill-runs thirty ounces silver per ton after sorting; developed by a tunnel forty-five feet in length.

**Ivanhoe.**—A. McMillen, C. Norris, and George Weston, all Cañon City, owners; claim 1500x300 feet; situated in Pomeroy Gulch, Chalk Creek Mining district, four miles from St. Elmo; located 1882; vein a fissure, with a pay streak twenty-four inches in width; ore—sulphurets of silver in a quartz gangue, which mill-runs, when sorted, $20 per ton; developed by tunnel eighty-two feet in length.

**Jack of Clubs.**—John Gilligan, Patrick McGowan, and William Reynolds, owners; claim 1500x300 feet; situated on the west slope of Mammae Mountain, Chalk Creek Mining district; vein a fissure, containing two and one-half feet in width of quartz, galena, and iron pyrites, which assays an average of $150 in gold and silver per ton; the developments consist of an inclined shaft 130 feet in depth.

**Jeff Hampson.**—T. J. Hampson, C. W. Buck, and Norman Martin, all Garfield, Colo., owners; claim 1500x300 feet; situated in Fooche's Gulch, Monarch Mining district, one and one-half miles from Garfield; located 1882; vein a fissure; ore, argentiferous galena in a quartz gangue; assays twenty ounces silver per ton; developed by an open cut twelve feet in length.

**Jennie.**—Owned by W. W. Campbell; claim 1500x300 feet; situated on Sugar Loaf Mountain, Chalk Creek Mining district; located 1877; contains four fissure veins, with crevices from six to twelve feet in width, through the vein-matter of which is scattered galena and iron pyrites, which assays eighty ounces silver per ton; developed by a tunnel 250 feet in length.

**Jim Fisk.**—John T. Redmon, Alpine, Colo., owner; claim 1500x300 feet; situated on the east slope of Boulder Mountain, Chalk Creek Mining district, three and one-half miles from Alpine; located 1879, and in process of patent; vein a fissure, with a crevice four feet wide, containing quartz, galena, and copper pyrites, which assays one-half ounce gold and forty-seven ounces silver per ton; developed by two inclines twenty-two and forty feet in length, respectively.

**Joe Russell.**—Howard Russell, W. C. Shinn, L. H. Alberti, all St. Elmo, Colo., R. W. Evans, Kansas, and W. Barker, Beaver City, Neb., owners; claim 1500x300 feet; situated on north-west slope of Chrysolite Mountain, Chalk Creek Mining district, at St. Elmo; located 1881; vein a fissure, with a crevice from three to six feet wide, and a mineral streak of iron and galena, which assays from three to twenty ounces silver and one-fourth ounce gold per ton; developed by a shaft thirty-five feet in depth, and an open cut ten feet long.

**Josephine Mining Company (The).**—Incorporated under the laws of Colorado; president, W. B. Biddle, La Porte, Ind.; secretary, J. M. Judah, Indianapolis, Ind.; owns the Josephine, Alpine, Iron, Hoosier Nos. 1 and 2 lodes, 1500x300 feet each; situated on the east slope of Weldon Mountain, Chalk Creek Mining district; veins all fissures, with crevices from four to ten feet in width, and pay streaks from six to twenty-four inches of galena and copper in a quartz gangue, which assays from 25 to 200 ounces



silver and trace of gold per ton; developed by shafts from 20 to 170 feet in depth and a tunnel 350 feet in length.

**Julia Bivans.**—J. W. Johnson and H. T. Johnson, both St. Elmo, Colo., H. T. Moore, Texas, and John Mandsley, Washington, D. C., owners; claim 1500x300 feet; situated on south slope of Barren Mountain, Chalk Creek Mining district, two miles from St. Elmo; located 1881; vein a fissure, with a crevice five feet wide of quartz carrying galena and copper, which assays sixteen per cent copper, one-fourth ounce gold, and seventy ounces silver per ton; developed by a tunnel sixty feet in length.

**Kangaroo.**—G. H. Hard, H. J. Ballard, George M. Chillcott, John Dwyer, all Pueblo, Colo., and Anson Sperry, Chicago, Ill., owners; claim 1500x300 feet; situated in Monarch Mining district, two miles from Garfield, Colo.; located in 1879; vein a fissure, with a pay streak two feet wide; ore—argentiferous galena and iron in quartz; assays from fifteen to forty ounces silver per ton; developed by tunnel 475 feet in length.

**Kentucky.**—A. R. Adair, Buena Vista, Colo., A. B. Sternberger, New York City, owners; agent, Alexander Bliley, Hancock, Colo.; claim 1500x300 feet; situated at Hancock, Chalk Creek Mining district; located in 1879, and in process of patent; vein a fissure, with a crevice twelve feet wide, containing quartz and galena, which mill-runs, when sorted, thirty per cent lead and fifteen ounces silver per ton; developed by shaft 130 feet in depth, and drifts and cross-cut thirty-six feet in length; worked by an engine twelve-horse-power.

**Kimbelry.**—J. C. Gilray, T. McGee, P. C. Ellsworth, J. K. Vanatta and Judge Miller, all Buena Vista, Colo., owners; claim 1500x3000 feet; situated on Mount Princeton, Chalk Creek Mining district, sixteen miles from Buena Vista; located in 1880; the claim contains three fissure veins, varying from two to five feet in width, of quartz and galena, which assays thirty-five ounces silver per ton; developed by three open cuts, fifteen, fifteen, and twenty-six feet in length, respectively.

**King.**—A. L. Dodge, Pitkin, Colo., owner; claim 1500x300 feet; situated on Murphy and Chrysolite Mountains, Chalk Creek Mining district, one mile from St. Elmo; located in 1881; vein a fissure, with a crevice eight feet wide, and a pay streak from four to thirty inches of galena and sulphurets in a quartz gangue, which assays from twenty-one to twenty-seven ounces silver per ton; developed by tunnel 110 feet in length.

**Lake View Mining and Tunneling Company (The).**—Incorporated under the laws of Colorado, in 1879; capital stock $150,000, in 1,500 shares of $100 each, non-assessable; president, W. W. Campbell; vice-president, St. John McHale—both Topeka, Kas.; secretary and treasurer, James Byrnes, New Orleans, La.; general manager, J. D. McCloskey, Colorado Springs; office St. Elmo, Colo.; owns the Lake View Tunnel site; situated in Grizzly Gulch, Chalk Creek Mining district, three miles from St. Elmo; located in 1879; on which a tunnel has been driven 625 feet, which has opened up four veins, on which have been located the Minnehaha, Mississippi, Bench, and Lyndon claims, 1500x300 feet each; veins all fissures, from three to eight feet in width, containing quartz and galena; developments—drifts in the veins aggregating 125 feet in length.

**Landers.**—A. D. Hinkle, W. R. Harp, C. F. Lander, J. R. DeRemier, S. S. Sandlinger, all Buena Vista, Colo., owners; claim 1500x300 feet; situated at South Cottonwood, Cottonwood Mining district, ten miles from Buena Vista; located in 1880; vein a fissure, with a crevice four feet wide, and a pay

streak from two to twenty inches of galena and quartz, which assays eight per cent copper, twenty-two per cent lead, and sixty ounces silver per ton; developed by a tunnel thirty feet in length, and a shaft fifteen feet in depth.

**Lehigh Group.**—Owned by Henry Yoder, N. Ray, and E. E. Thomas; embracing two parallel lodes and one cross lode, each being covered by 1500x300 feet of surface ground; situated at the head of Poplar Gulch, Chalk Creek Mining district, two and one-half miles from St. Elmo; the veins are all fissures, from two to five feet in width, containing argentiferous galena in a quartz gangue, which assays from twenty to fifty ounces silver per ton; developed by open cuts which expose the Lehigh vein for 500 feet, and a cross-cut tunnel 120 in length.

**Lilly White Mining and Milling Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $100,000, in 10,000 shares of $10 each, non assessable; president, B. Esinan, St. Louis, Mo.; vice-presidsnt, —— Fleish; secretary, P. C. Ellsworth; treasurer, A. Frauendall, all New York City; general manager, Michael Goldman, Buena Vista, Colo.; offices Fifth street, St. Louis, Mo., and Buena Vista, Colo.; owns the following lodes: Hortense No. 2, Frankie, Hope, Summit, Mountain Boy, and Putty 1500x300 feet each; situated on Mount Princeton, Chalk Creek Mining district, eleven miles from Buena Vista; located in 1881; fissure veins, with crevices from two to seven feet in width, and pay streaks from three to forty inches of quartz galena and copper, which mill-runs, when sorted, six per cent lead, seven per cent copper, and forty ounces silver per ton; developed by a tunnel 400 feet in length, and cross-cuts aggregating 1500 feet, which cuts the veins at depth of 600 to 900 feet from the surface; output over 200 tons

**Lindsey and Mollie Moore.**—Uriah Taylor, Adam Kiefner, A. J. Fogle, all Hancock, Colo., owners; claim 1500x300 feet; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, one-half mile from Hancock; located in 1880; fissure veins, with crevices, from four to eight feet in width, and pay streaks from six to sixteen inches of quartz and galena, which assays sixteen ounces silver per ton; developed by two shafts ten feet in depth each, and thirty feet of open cuts.

**Little Ella and Little Marie.**—F. C. Day, Hancock, and W. T. Swift, Leadville, Colo., owners; claims 1500x300 feet each; situated on Mineral Hill, adjoining the Stonewall mine, Chalk Creek Mining district, one-half mile from Hancock; located in 1879, and in process of patent; fissure veins, with crevices from three to twenty feet in width, and pay streaks from six to thirty inches of quartz and galena, which mill-runs, when sorted, fifty per cent lead and thirty-eight ounces silver per ton; developed by shafts twenty-five and fifty feet in depth, respectively, and tunnel fifty feet in length.

**Little Grace Group.**—John Maher and James H. Johnson, both Buena Vista, and H. S. Ewers, Cañon City, Colo., owners; group comprises the Little Grace, Carbonate, and St. Julian, 1500x300 feet each; situated at Granite, Granite Mining district; located in 1881; contact vein containing one foot in width of carbonates and galena with quartz, which assays forty-eight per cent lead and ninety-six ounces silver per ton; developed by a shaft twenty feet in depth, and a tunnel 200 feet in length.

**Livingstone Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $6,000,000, in 600,000 shares of $10 each, non-assessable; president, James W. Latta; secretary, Lewis C. Greene; treasurer, Charles S. Greene; office 154 South Fourth street, Philadelphia, Pa.; together with J. M. McClure, of Alpine, own the Livingstone lode, 1500x300 feet; situated on the south slope of Murphy Mountain, Chalk



Creek Mining district, two and one-half miles from St. Elmo; located in 1879, and patented in 1882; the vein is an extension of the Murphy vein, and has a crevice varying from two to ten feet in width, and a pay streak from twelve inches to four feet of galena, iron and copper pyrites, quick zinc blende, and sulphurets of silver in a quartz gangue, which mill-runs, when sorted, from one to two ounces gold and ninety ounces silver per ton; developed by four levels, at various depths, intersecting the vein, and ranging from 35 to 550 feet in length, and a shaft eighty feet in depth, in mineral.

**Lost Wonder.**—W. I. Isherwood, Garfield, R. Jeske, D. G. Peabody, S. T. Ferrier, Louis Franck, all Cañon City, Colo., owners; claim 1500x300 feet; situated in the Monarch Mining district, two and one-half miles from Garfield, and in process of patent; fissure vein, containing a pay streak from ten to twenty inches in width; ore—sulphurets and chlorides of silver and argentiferous galena in a quartz gangue, assays from $20 to $1,100 per ton; developed by two shafts 35 feet and 135 feet in depth, respectively, and cross-cut 230 feet long.

**Lost Wonder.**—James Taylor, Gunnison, and —— Squires, Cañon City, Colo., owners; claim 1500x300 feet; situated on middle fork of the South Arkansas River, Monarch Mining district, eight miles from Maysville; located 1879; fissure vein, with a crevice three feet wide of quartz and galena, which assays from 50 ounces to 200 ounces silver per ton; developed by shaft 125 feet in depth, and a tunnel 300 feet in length.

**Mammoth.**—A. V. Hunter, Leadville, E. B. Stark and N. and John Wilson, owners; claim 1500x300 feet; situated at the head of Grizzly Gulch, Chalk Creek Mining district; vein a fissure, with a crevice from six to twenty inches in width of galena in a quartz gangue, which mill runs, when sorted, fifty per cent lead and from fifteen to twenty ounces silver per ton; developed by tunnel 130 feet in length.

**Marion H.**—J. W. Johnson, M. L. Bowling, and Soren Hanson, all St. Elmo, Colo., owners; claim 1500x300 feet; situated on the south slope of Barren Mountain, Chalk Creek Mining district, three-fourths mile from St. Elmo; located 1881; fissure vein, with a crevice seven feet wide, and a pay streak from eight to forty inches of quartz, galena, and copper pyrites, which mill-runs, when sorted, one-half ounce gold and fifty ounces silver per ton; developed by tunnel sixty feet in length, and a drift on the vein twenty feet in length.

**Mary Murphy Mining Company (The).**—Incorporated under the laws of Missouri, in 1880; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, James H. Morley; vice-president, M. Donaldson; secretary and treasurer, C. H. Billings—all St. Louis, Mo.; general manager, John G. Kelly, Buena Vista, Colo.; mining engineer, T. W. Werlitz, St. Elmo, Colo.; offices corner Fourth and Market streets, St. Louis, Mo., and St. Elmo, Colo.; owns the Mary Murphy mine, 1500x300 feet; situated on apex of Murphy Mountain, Chalk Creek Mining district; located 1879, and patented 1880; claim has two veins—the Pat and Mary Murphy, which average six feet each in width, containing galena and sulphurets in a quartz gangue carrying gold and silver, which mill-runs, when sorted, from one to two ounces of gold and from thirty to fifty ounces silver per ton; Mary Murphy vein developed by four tunnels from 100 to 500 feet in length, with four connecting shafts; and the Pat Murphy by two tunnels 146 and 250 feet long, respectively; improvements—one wire Tramway of the Halliday pattern, about one mile in length, with a capacity of 100 tons per diem; connects the mine with the Company's ore-bins on the Denver and South Park Railway, at Murphy's Switch; and the Company has under advisement the erection of a

mill for the treatment of their ores; output 3,000 tons, and it is claimed that the mine has sufficient resources for the production of fifty tons daily during the next two years, with an average value of over $50 net per ton, if reasonable rates of transportation could be obtained.

**Mattie.**—Owners Joseph E. McClure and H. C. Bostwick, both Alpine, Colo.; claim 1200x300 feet; situated on the north slope of Mammae Mountain, Chalk Creek Mining district, one and one-half miles from Alpine; located in 1875; vein a fissure, with a crevice from three to four feet in width of quartz carrying galena and gray copper, which mill-runs, when sorted, twenty-eight ounces silver per ton; developed by two drifts 45 and 205 feet in lenth, respectively.

**Mayflower.**—Owners McMillen Bros., Cañon City, Colo., J. A. Loper, Marietta, Ohio, and D. C. Metska, Topeka, Kas.; claim 1500x300 feet; situated in Pomeroy Gulch, Chalk Creek Mining district, four miles from St. Elmo; located in 1880; vein a fissure, with a crevice five feet wide containing argentiferous galena in a quartz gangue, which assays $20 per ton; developed by a tunnel sixty-five feet in length.

**Michigan.**—Owners Thos. Moore and C. Hunter, both Garfield, Colo.; claim 1500x300 feet; situated in the Monarch Mining district, near Garfield, located in 1879; vein a fissure, with a pay streak fourteen inches wide containing argentiferous galena and silver glance in a quartz gangue, which mill-runs, when sorted, fifty ounces silver per ton; developed by a tunnel forty feet in length.

**Michigan Group.**—Owned by Mather, Quick & Macumber; group comprises the Michigan, Betsy, Twin Lake, and Red Lion lodes, 1500x300 feet each; situated at the junction of Chrysolite and Pomeroy Mountains, on the line of the Monarch and Chalk Creek Mining districts, eleven miles from Maysville; veins all fissures, with crevices from seven to nine feet in width, and pay streaks from six to twenty inches of argentiferous galena and iron pyrites in a quartz gangue, which assays fifty per cent lead, one-half ounce gold, and from thirty-five to sixty ounces silver per ton; developed by two adits fifteen feet in length each, cross-cut tunnel twenty-five feet in length, and a drift on the vein thirty feet in length.

**Middle Fork Mining Company (The).**—General managers, P. R. Rort and M. S. Marshall; office Garfield, Colo.; owns the Barry Tunnel site; situated in the Monarch Mining district; located in 1879; upon which a tunnel is being driven, now 323 feet long, to develop the following claims: Little Gem and Nautilus lodes, and cutting one fissure vein thirteen feet in width of galena in a quartz gangue, which assays twenty-nine ounces silver per ton.

**Midway Placer Group.**—Owners J. C. H. Grabill, J. W. Rowell, both Buena Vista, Colo., and W. B. Mason, Chicago, Ill.; group comprises the Midway, St. Lawrence, and May placers, covering 400 acres of placer land; situated three miles from Bnena Vista, Buena Vista Mining district; located in 1873; developed by 300 feet of fluming, two miles of ditching, and a reservoir with capacity for 10,000 gallons of water.

**Miller.**—N. and S. O. Gleason, W. B. Biddle, S. B. Judah, and others, owners; claim 1500x300 feet; situated on Chrysolite Mountain, Chalk Creek Mining district; vein a fissure, with a crevice ten feet in width, containing galena and iron pyrites scattered through a quartz gangue; developments consist of a shaft sixty feet in depth.



**Miner's Delight Group.**—Lefever and Goodrich, Garfield, Colo., owners; comprises five claims, 1500x300 feet each; situated in Camp Summit, Monarch Mining district; located in 1870; vein a fissure; ore, argentiferous galena in a quartz gangue; assays sixteen ounces silver per ton; developed by a tunnel 126 feet in length.

**Miner's Exchange Mining Company (The).**—Incorporated under the laws of Colorado, in September 1882; capital stock $2,00,000, in 200,000 shares of $10 each, non-assessable; general manager, W. S. McFarland, Alpine, Colo.; owns the Rothschild Tunnel site, 3000x6 feet; situated on east slope of Barren Mountain, Chalk Creek Mining district, at St. Elmo; located in 1881; on which a tunnel is driven 145 feet in length, which has opened up three veins, upon which the following named claims have been located, viz.: Florida Girl, McFarland, and Silver Bell, 1500x300 feet each; the veins are fissures, ranging from two to four feet in width, containing galena, gray copper, and white iron in a quartz gangue, which assays fifteen per cent lead and forty ounces silver per ton; developed by drifts from the tunnel in each lode.

**Mison.**—French Bros., Garfield, Colo., owners; claim 1500x300 feet; situated in the Monarch Mining district; located in 1879; vein a fissure, with a pay streak from six to twelve inches wide; ore—gold quartz and galena, which assays from $18 to $25 per ton in gold; developed by a shaft forty feet in depth, and a tuunel 100 feet in length.

**Mollie.**—Owned by Francis A. La Grave and Neree Valle; claim 1500x300 feet, adjoining the end lines of the Pioneer, of which it is an extension; situated on Murphy Mountain, in Chalk Creek Mining district; the vein is similar in character to the Pioneer, and varies in width from four to thirty feet, in which are seams of galena, iron pyrites, and sulphurets, in a quartz gangue, varying in width from two to eighteen inches, which mill-runs, when sorted, an average of one and one-half ounces gold and forty ounces silver per ton; developed by a tunnel 150 feet in length, and drift twenty feet long, from which is now run a winze forty feet in depth.

**Mountaineer.**—Howard Russell and John T. Robertson, both St. Elmo, Colo., owners; claim 1500x300 feet; situated on Chrysolite Mountain, Chalk Creek Mining district, at St. Elmo; located in 1881; vein a fissure, with a crevice four feet wide of galena in quartz; developed by shaft twelve feet in depth.

**Mt. Ætna Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. Packard; vice-president, E. Y. Moore; secretary and treasurer, D. Jackson; general manager, H. A. Pimpton,—all Chicago, Illinois; office 164 Dearborn street, Chicago; owns the Uncle Sam, Ocean Wave, Eighth Wonder and Dolly Varden lodes, 1500x300 feet each; situated at Garfield, Monarch Mining district—Uncle Sam and Ocean Wave patented; veins all fissures from two to six feet in width, containing quartz carrying gold and galena, which mill-runs, when sorted, one half ounce gold and thirty ounces silver, and eight per cent copper per ton; developed by a tunnel 290 feet in length, shaft 100 feet in depth, and 100 feet of drifts. Another tunnel has been started 200 feet further down the hill, to cut the Uncle Sam and Ocean Wave lodes.

**Mt. Carmel.**—C. F. Lander, J. R. DeReimer, both Buena Vista, and the Yale Mountain Mining and Milling Company, of Pennsylvania, owners; claim 1500x300 feet; situated in South Cottonwood, Cottonwood Mining district, ten miles from Buena Vista; located in 1879, and patented December, 1882; vein a fissure, with crevice varying from three to forty feet in width,

and a pay streak from two to thirty inches of quartz and galena, with iron and copper pyrites, which mill-runs, when sorted, twenty-seven per cent lead, ten per cent copper, and fifty-nine ounces silver per ton; developed by a tunnel 120 feet in length, a shaft eighty-five feet in depth, and a cross-cut thirty-five feet in length; output 100 tons of ore. (See Yale Mountain Mining and Milling Company.)

**Mt. Princeton International Mining Company (The).**—Incorporated under the laws of Colorado, August 23, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, A. C. Holt; vice-president, N. B. Holt; secretary, E. Lewis—all BuenaVista, Colo.; treasurer, Wm. Robinson, Nebraska; office Buena Vista, Colo.; owns the International, Silver Bells, Charles O'Connor, and Little Secret lodes; contains thirty acres; situated on Mt. Princeton, Cottonwood Mining district, ten miles from Buena Vista; located in 1880; veins all fissures, with crevices from two to six feet in width, and pay streaks from six to thirty inches of quartz and galena, which assays thirty per cent lead and sixty ounces silver per ton; developed by five shafts from ten to fifty feet in depth and a tunnel sixty feet in length.

**Narragansett.**—Hampson & Townsend, Garfield, Colo., owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district, near Garfield; located in 1880; vein a fissure, with a crevice four feet wide; ore—argentiferous galena in a quartz gangue; assays sixty ounces silver per ton; developed by a shaft eighteen feet in depth and an open cut thirty feet in length.

**Nellie Baker.**—H. P. Baker, Alpine, Colo., owner; claim 1500x300 feet; situated on Boulder Mountain, Chalk Creek Mining district, four miles from Alpine; located in 1882; vein a fissure, with a crevice fourteen feet wide, and a pay streak from four to twelve inches of quartz and galena, which assays thirty-six ounces silver per ton; developed by a shaft twenty-five feet in depth.

**Nevada and Wolverine.**—James Taylor, Gunnison, and James Judy, Tomichi, Colo., owners; claims 1500x300 feet each; situated on the middle fork of the South Arkansas River, one and three-quarters miles from Tomichi, Monarch Mining district; located in 1880; fissure veins, with crevices from two to three feet in width, and pay streaks from six to thirty inches of gold-bearing quartz, which assays $42 in gold per ton; developed by two shafts twenty feet each in depth.

**New York and Colorado Mining, Developing, and Prospecting Company (The).**—Incorporated under the laws of Colorado, in March, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, A. P. Curry; vice-president, J. L. Pendery; secretary and assistant-treasurer, F. R. Miller; treasurer, James Streeter; superintendent, William Elliott Lee- all Leadville Colo.; offices 201 East Seventh street, Leadville, Colo.; owns the Cumberland lode, 1500x300 feet; situated in Clear Creek Gulch; the vein is a contact four feet wide, pay streak from two to six inches of galena and lead carbonates in a quartz gangue, which assays from twenty to forty ounces silver per ton; developed by shaft twenty feet in depth.

**New York and Colorado Mining Syndicate Company.**—Incorporated under the laws of Colorado, in 1880; capital stock $1,500,000 in 150,000 shares of $10 each, non-assessable; paid-up capital of $200,000. president, Hugh J. Jewett; vice-president, Thomas H. Canfield; secretary and treasurer, James C. Spencer—all New York City; offices No. 2 Wall street, New York City. The object of the Company is the purchasing of mines and prospects and developing them for sale, or for the organization of new companies under their control. The Company have already organized the Cashier and Champion Mining Company, (See Summit County) and the Columbus Mining Company (See Chaffee County).



**Niagara Silver Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, January 25, 1880; capital stock $1,000,000 in 100,000 shares of $10 each, non-assessable; president, A. Y. Jones, Pittsburgh, Pa.; vice-president and general manager, P. C. Wright, Lewiston, N. Y.; secretary and treasurer, J. D. McCloskey, Colorado Springs, Colo.; Superintendents, H. D. and W A. Burnett; office St. Elmo, Colo.; owns a smelting-works, built by Fraser & Chalmers; situated at Iron City, near St. Elmo; main building 60x50 feet, containing Water Jacket Furnace, Blake Crusher, Baker Blower, Cornish Rolls, and complete sampling machinery, motive power for the same being supplied by and engine forty-horse-power, and the works have a capacity for treating forty tons of ore in twenty-four hours; in connection with which is a laboratory, office, ore-sheds with capacity for 1,500 tons of ore, all erected on forty acres of mill sites, with excellent water-power.

Also owns the Monarch lode, 1500x300 feet; situated on Sugar Loaf Mountain, Chalk Creek Mining district, one-half mile from Iron City; located in 1880; vein a fissure, with a crevice two feet wide of quartz and galena, which assays forty ounces silver per ton; developed by open cut and drift twenty-five feet in length.

Also owns the Niagara and Columbkill lodes, 1500x300 feet each; situated on Sugar Loaf Mountain, Chalk Creek Mining district, one-fourth mile from Iron City; located in 1881; veins both fissures, with crevices from one to three feet in width, and pay streaks from four to fifteen inches of quartz and galena, which mill-runs, when sorted, twenty per cent lead and thirty ounces silver per ton; developed by a drift 200 feet in length, and a cross-cut tunnel fifty-four feet in length.

Also owns the Yankee Boy lode 1500x300 feet; situated on Princeton Mountain, Chalk Creek Mining district, four and one-half miles from Iron City; located in 1875; vein a fissure, with a crevice twelve feet wide, and a pay streak from six to twenty-four inches of quartz and galena, which assays fifty-one per cent lead and thirty ounces silver per ton; developed by an incline 130 feet in length and twenty feet of drifts.

Also owns the Grand Rapids lode, 1500x300 feet; situated on the west slope of Mammae Mountain, Chalk Creek Mining district, one-fourth mile from Iron City; located in 1880; vein a fissure, with a crevice from three to four feet wide, and a pay streak of eighteen inches of quartz and galena, which assays fourteen per cent lead and seventy ounces silver per ton; developed by a shaft thirty-five feet in depth.

**Occidental.**—Owners T. D. Skelton, S. Livezy, and T. J. Dow, all Hancock, Colo.; claim 1500x300 feet; situated on Barren Mountain, Chalk Creek Mining district, one and one-fourth miles from Hancock; located in 1880; vein a fissure six feet wide containing quartz seamed with galena, which assays sixty ounces silver per ton; developed by a shaft twenty feet in depth, and a tunnel sixty-five feet in length.

**Old Discovery and New Discovery.**—Owners A. W. Root, D. Greenstreet, and G. Baitsell, all St. Elmo, Colo.; claims cover sixteen acres of ground; situated on west slope of Murphy Mountain, Chalk Creek Mining district, two and one-half miles from St. Elmo; relocated in 1880; vein a fissure, with a crevice three and one-half feet wide of quartz, galena, and copper, which assays thirty-five ounces silver and two ounces gold per ton; developed by two shafts ten and sixteen feet in depth, respectively, and two tunnels 30 and 150 feet in length, respectively.

**Opal.**—Owners T. R. Higgins, Henry W. Smith, and others; claim 1500x 300 feet; situated on Princeton Mountain, Chalk Creek Mining district; vein a fissure, containing hematite iron, and about sixteen ounces silver per ton; developed by a tunnel on the vein 125 feet in length.

**Orietta.**—T. J. Hampson, Henry Zillhaver, and Wm. Reed, all Garfield, Colo., owners; claim 1500x300 feet; situated in the Monarch Mining district, near Garfield; located in 1879; vein a fissure, with a pay streak fifteen inches wide; ore—argentiferous galena and silver glance in a quartz gangue, which mill-runs, when sorted, sixty ounces silver per ton; developed by tunnel sixty feet in length.

**Orphan Boy.**—J. Hampson and others, Garfield, Colo., owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a crevice two feet wide; ore—argentiferous galena in a quartz gangue; assays $47 per ton; developed by a thirty-foot shaft and open cut.

**Oskosh.**—J. B. Henderson, J. L. Sanderson, and J. G. True, owners; claim 1500x300 feet; situated in Monarch Mining district, one-fourth mile from Chaffee; located in 1878; vein a fissure, with a crevice three feet wide; ore—argentiferous galena in a quartz gangue, which mill-runs, when sorted, sixty ounces silver per ton; developed by a tunnel 120 feet in length and a shaft sixty feet in depth.

**Parliament and Big Bonanza.**—Joseph Halshneider and F. M. Scott, both Hancock, Colo., and Henry Brown, Pomeroy Gulch, owners; claims 1500x300 feet each; situated on Pomeroy Mountain, Chalk Creek Mining district, one and one-fourth miles from Hancock; located in 1882; veins are fissures, with crevices from two and one-half to twelve feet in width of quartz and galena, which assays one ounce gold and twenty ounces silver per ton; developed by a tunnel eighty-five feet in length.

**Patten.**—Owned by J. M. Patten, W. A. Gipson, and A. S. Blake; claim 1500x300 feet; situated on Mineral Hill, above the town of Hancock; vein a fissure four feet wide, carrying a small streak of steel galena, which assays three-fourths ounce gold and thirty ounces silver per ton; the owners are now driving a cross-cut tunnel to cut the vein at a considerable depth.

**Pembina Consolidated Silver Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, James W. Latta; treasurer, N. F. Lightner; secretary, Lewis C. Greene—all Philadelphia, Pa.; office 154 South Fourth street, Philadelphia, Pa.; owns the Pembina, Red Rover, and Monroe lodes, 1500x300 feet each; situated in Chalk Creek Mining district; veins are fissures, with crevices from four to five feet in width, containing galena, copper, and iron pyrites in quartz, which assays from twenty to fifty ounces silver per ton; developed by four tunnels from twenty-five to eighty feet in length; also owns a mill site of ten acres near the loae claims.

**Pembina Mining and Milling Company.**—Incorporated under the laws of Colorado; president, Francis V. Greene; secretary, Jos. F. Lamorelle—both Philadelphia, Pa.; superintendent, P. A. Snell, St. Elmo, Colo.; owns the Clifton lode, 1500x300 feet; situated on Sugar Loaf Mountain, Quartz Creek Mining district, containing four fissure veins, with crevices from four to six feet in width; nature of ore—galena and iron pyrites in a quartz gangue, which assays from one-half to one ounce gold and from 20 to 250 ounces silver per ton; developed by drift on one vein 180 feet in length, and a cross-cut tunnel is now being driven to open up the four veins; also owns the Pembina Concentrator, situated near the mines.



**Pine Tree.**—H. L. Fitch and Wm. Carey, both Columbus, Colo., owners; claim 1500x300 feet; situated in Monarch Mining district, one-third mile from Columbus; located 1881; fissure vein, with a crevice four feet wide; ore, quartz carrying gold; assays two ounces gold and sixteen ounces silver per ton; developed by tunnel sixty-eight feet in length and shaft thirty-two feet in depth.

**Pinafore.**—J. E. McClure, H. C. Bostwick, both Alpine, and D. D. Blivin, Tin Cup, Colo., owners; claim 1500x300 feet; situated on Murphy Mountain, Chalk Creek Mining district; relocated 1880, and patented October, 1882; containing three fissure veins, with crevices from two to five feet in width of quartz and galena, with some gold, which mill-runs, when sorted, three-fourths ounce gold and fifteen ounces silver per ton; developed by five shafts from two to thirty-two feet in depth, and a cross-cut tunnel thirty-five feet in length.

**Pioneer.**—Owned by J. Montee and F. A. La Grave; claim 1500x300 feet, and probably on the Murphy vein; situated on Murphy Mountain, Chalk Creek Mining district; vein a fissure, with a crevice six feet wide at the surface, which widens considerably with depth, but having barren streaks through its center; although at all points of development it has veins of galena, iron pyrites, and sulphurets in a quartz gangue from six inches to three feet in width, which mill-runs, when sorted, from one to two ounces gold and thirty to fifty ounces silver per ton; developments consist of tunnel fifty feet in length, a cross-cut twenty-two feet long, and a drift sixty feet in length.

**Plainfield.**—Lewis D. Baugh, L. G. Fisher, Jr., T. S. Scott, and Ouderdont Bros., owners; claim 1500x300 feet; situated on Franklin Mountain, Chalk Creek Mining district; vein a fissure, containing a pay streak from three to fifteen inches in width of galena and sulphurets in a quartz gangue, which assays twenty-five per cent copper and 175 ounces silver per ton; developed by an incline shaft fifty feet in depth, and a tunnel on the vein 110 feet in length.

**Pomeroy Group.**—J. E. McClure, H. C. Bostwick, both Alpine, J. H. Bell and A. W. Redd, both Idaho Springs, Colo., owners; group comprises the Mineral Point, Big Smoke, Goldstone, and Little Lily lodes, 1500x 300 feet each; situated on north-east slope of Pomeroy Mountain, Chalk Creek Mining district; located 1881, and patented October, 1882; fissure veins, with crevices from six to eight feet in width of quartz and galena, with iron and copper pyrites carrying gold, which assays twenty-five per cent copper, from one to two ounces gold, and twenty ounces silver per ton; developed by four shafts from thirty to seventy feet in depth, and one level 200 feet in length; there is in connection with these lodes a mill site of five acres.

**Princeton.**—William and J. Buckey, Louis James, all Alpine, Colo., owners; claim 1500x300 feet; situated on Princeton Mountain, Chalk Creek Mining district, three miles from Alpine; located in 1880; fissure vein, with a crevice eight feet wide of quartz and galena, which assays thirty ounces silver per ton; developed by a drift twenty-five feet in length.

**Queen Group.**—Comprising the following claims: Silver King, Mountain Queen, Morning Star, Hawkeye, Weehawkin, 1500x300 feet each; Townsend Bros., Garfield, Colo., owners; claims situated in Camp Summit, Monarch Mining district; located in 1879; fissure veins, with crevices from three to eight feet wide; ore, native and brittle silver in a quartz gangue;

assays from 100 to 500 ounces silver per ton; developed by a tunnel 900 feet in length and some drifting.

**R. E. Lee.**—A. McMillen, Cañon City, and Henry Brown, Pomeroy Gulch, Colo., owners; claim 1500x300; situated in Pomeroy Gulch, Chalk Creek Mining district, four miles from St. Elmo; located in 1880; fissure vein, with a pay streak eighteen inches wide; ore, galena in a quartz gangue; assays $50 per ton; developed by a cross-cut tunnel 200 feet in length.

**Rarus and Warrior Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in April, 1882; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, C. M. Shipley; vice-president, C. M. Mense; secretary and treasurer, R. J. Coleman—all St. Louis, Mo.; general manager, E. H. McCoy, Hancock, Colo.; offices 222 Eighth street, St. Louis, Mo., and at Hancock, Colo.; owns the Rarus and Warrior lodes, 1500x300 feet each; situated on west slope of Pomeroy Mountain, Chalk Creek Mining district, at Hancock; located 1880, and patented November, 1881; fissure vein, with a crevice twenty feet wide, and a pay streak from six to thirty inches of quartz and galena, which mill-runs, when sorted, from 50 to 100 ounces silver per ton; developed by two tunnels 40 and 112 feet in length, respectively, and one shaft seventy-five feet in depth; worked by engine eighty-five-horse-power.

**Rathbun Group.**—Five claims 1500x300 feet each, viz.: Rathbun, Silver Star, Caribou, Chadbourne, and Minnesota; situated at the head of Black Bear Gulch, in Cleora Basin, LaPlata, or Clear Creek, district; owners Rathbun, Palmer & Wiedemeyer; veins all fissures, in the Caribou six feet wide at the outcrop, from which surface assays of twenty ounces silver per ton have been obtained, and the Silver Star shows a twenty-inch crevice, all mineral, on which the assays run as high as 150 ounces silver per ton.

**Red Mountain Mining and Milling Company (The).**—Incorporated under the laws of Colorado, December 1, 1881; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, L. M. Meily, Ohio; vice-president, H. Gaston; secretary, J. R. Hammond; treasurer, C. C. Parsons—all Leadville; superintendent, —— Picking; owns a stamp-mill 40x60 feet and one story high, erected on a five-acre mill site; situated in Lake Creek Gulch, at foot of Red Mountain, Red Mountain district, as well as 160 acres of placer ground adjoining; mill equipped with thirty stamps, furnished with copper plates and blankets; capacity thirty tons.

**Robert Wilson.**—F. McClure, Garfield, Colo., owner; claim 1500x300 feet; situated in the Monarch Mining district, one and one-half miles from Chaffee; located in 1879; vein a fissure, with a crevice four feet wide; ore, argentiferous galena in a quartz gangue; assays fifty ounces silver per ton; developed by a tunnel 136 feet in length, and two shafts thirty-seven and sixty feet in depth, respectively.

**Rothschild Tunnel.**—McFarlane, Bayle, and others, owners; site 3000x6 feet; situated on Barren Mountain, Chalk Creek Mining district, on which a tunnel is driven 106 feet in length, and which will cut the main lead sought for at a distance of ninety-four feet more; several small leads have already been opened up, which assay from forty to sixty per cent lead and from twenty to thirty ounces silver per ton.

**Schuyler Mining Company (The).**—Incorporated under the laws of Colorado; president, Geo. Little; vice-president, E. M. Anderson; treasurer, August Warren—all Rushville, Ill.; secretary, D. E. Ray; superintendent, A. J. Byrns—both St. Elmo, Colo.; offices Rushville, Ill., and St. Elmo



Colo.; owns the Silver King and nine other lode claims, 1500x300 feet each; situated on the west slope of Mammae Mountain, Chalk Creek Mining district, one of which contains at least thirty veins, all true fissures, in granite rock, with crevices from two to six feet in width, containing galena in a quartz gangue, which assays from thirty to fifty ounces silver per ton; developed by a cross-cut tunnel 225 feet in length, and a drift on the Silver King vein seventy feet in length.

**Seraphim.**—J. B. Henderson, St. Louis, Mo., J. G. True, Chaffee, Colo., and Mrs. Joseph Hutchinson, Salida, Colo., owners; claim 1500x300 feet; situated in Monarch Mining district, one mile from Chaffee; located in 1878; vein a fissure, with a crevice sixteen feet wide; ore, argentiferous galena and carbonates in a quartz gangue, which mill-runs, when sorted, thirty-four ounces silver per ton; developed by a shaft 135 feet in depth, and a tunnel 190 feet in length; output twenty tons per day.

**Sharpe and Fleetford Tunnel Company (The).**—Incorporated under the laws of Colorado, December, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Quincy Hunsiker, Philadelphia, Pa.; vice-president, Chas. M. Sharpe, Buena Vista, Colo.; secretary, Henry A. Mathieu; treasurer, Herman Wishmen—both Philadelphia, Pa.; general manager, James Fleetford, Buena Vista, Colo.; offices Buena Vista, Colo., and 226 South Seventh street, Philadelphia, Pa.; owns the following lodes, viz: Fay, Frankie, Gray Eagle, Diamond, Amherst, Wild Irish Boy, Chicago Boy, Bonanza, 1500x300 feet each; situated on Mount Princeton, Cottonwood Mining district, ten miles from Buena Vista; located 1880 and 1881; veins all fissures, with crevices from two to ten feet in width, and pay streaks from six to forty inches of galena, leaf silver, and black sulphurets, in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; Fay developed by a tunnel seventy-eight feet in length, Frankie by a shaft thirty feet in depth, Amherst by a tunnel 170 feet in length, and has a quartzite dike with the mineral on both sides; Wild Irish Boy is developed by a shaft 127 feet in depth, in galena and carbonates; regular shipments are made from the property.

**Sheridan Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, July 29, 1882; capital stock $1,500,000, in 160,000 shares of $10 each; president, Joseph Bardine, Leadville, Colo.; vice-president, A. G. Sheridan, Vicksburg, Colo.; secretary, James T. Meagher; treasurer, J. C. Cline—both Leadville, Colo.; superintendent, A. H. Gosnell, Vicksburg, Colo.; offices 210 Pine street, Leadville, Colo.; owns the Buffalo Group of mines, consisting of five claims, 1500x300 feet each; situated on Mount Hope, La Plata Mining district, ten miles from Vicksburg; located 1881; veins all fissures, with crevices from two to four feet in width of quartz and argentiferous galena; developed by six shafts ranging from ten to fifteen feet in depth.

**Silent Friend.**—Owners B. F. Smith and G. A. Turner, both Columbus, Colo.; claim 1500x300 feet; situated in the Monarch Mining district, one mile from Chaffee; located in 1878; vein a fissure, containing argentiferous galena and carbonates in a quartz gangue, which mill-runs, when sorted, $45 per ton; developed by a tunnel sixty-five feet in length and a shaft 100 feet in depth.

**Silver Bell.**—Owned by Sullivan, Morriott, and others, Maysville, Colo.; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; vein a fissure, with a crevice four feet wide containing argentiferous galena in a quartz gangue, which assays thirty ounces silver per ton; developed by a tunnel sixty-five feet in length.

**Silver Chain.**—Owners J. and J. Grundy, Garfield, Colo.; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1881; vein a fissure, with a crevice twelve feet wide containing argentiferous galena in a quartz gangue, which assays fifteen ounces silver per ton; developed by a tunnel thirty feet in length.

**Silver King.**—Edward A. Sperry, Garfield, Colo., agent; claim 1500x300 feet; situated in Monarch Mining district, two miles from Garfield; located in 1880; vein a fissure, containing white iron and galena in a quartz gangue, which assays thirty ounces silver per ton; developed by a tunnel twenty-five feet in length.

**Silver Prince Group.**—Owners J. C. Irving, P. C. Ellsworth, J. K. Vanatta, and R. W. Taylor, all Buena Vista, Colo.; general manager, E. H. Stafford; group comprises the Silver Prince, Silver Bell, Silver Ring, and Silver Crown lodes, 1500x300 feet each; situated on Mt. Princeton, Cottonwood Mining district, seven miles from Buena Vista; located in 1880; veins all fissures, with crevices from three to five feet in width, and pay streaks from six to eighteen inches of galena and quartz, which mill-runs, when sorted, thirty per cent lead and thirty-two ounces silver per ton; developed by five shafts from twenty to forty feet in depth.

**Silver Top.**—Owners G. L. Cornwall and L. L. Wells, both Leadville, Colo., and W. Q. Haworth, Wheeler, Colo.; office 614 Harrison Avenue, Leadville, Colo.; claim 1500x300 feet; situated on the main range of the Rocky Mountains, fifteen miles from Granite, Clear Creek Mining district; located in 1881; vein a fissure, with a crevice two feet wide containing quartz and galena, which assays two ounces gold and fifteen ounces silver per ton; developed by a tunnel twenty feet in length.

**Sir William Wallace.**—I. N. Barrett, A. D. Hinkle, J. C. Gilray, and Lewis F. Crane, all Buena Vista, Colo., owners; claim 1500x300 feet; situated on Mt. Princeton, Chalk Creek Mining district, sixteen miles from Buena Vista; located in 1880; fissure vein, with a crevice seven feet wide, and a pay streak from six to thirty inches of quartz and galena, which assays 100 ounces silver per ton; developed by two tunnels twenty-four and seventy-eight feet in length, respectively, and a shaft fifteen feet in depth.

**Sitting Bull.**—W. L. and A. D. Pennington, both Alpine, Colo., owners; claim 1500x300 feet; situated on the west side of Baldwin Gulch, Chalk Creek Mining district, four and a half miles from Alpine; located in 1880; fissure vein, two and a half feet wide of quartz and galena, which assays from fifty to seventy per cent lead and from thirty to sixty-five ounces silver per ton; developed by a tunnel 175 feet in length.

**Stamper, E. L. Davis Combination, and Revenue.**—W. W. Stamper, Louisville, Ky., Ed. C. Sandell, John Sauve, and W. H. King, all Leadville, Colo., owners; office 137 West Chestnut street, Leadville, Col.; claims cover forty-four acres; situated on Red Mountain, Red Mountain Mining district; located in 1880; ore, quartz carrying gold and silver; assays from one and three-fourths to six ounces gold and 100 to 600 ounces silver per ton; developed by tunnel forty feet in length.

**Stanley Mining Company (The).**—Incorporated under the laws of Colorado, October 3, 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Louis Davis, St. Elmo, Colo; vice-president, Thomas Stark, Colorado Springs; secretary and superintendent, A. J. Byrnes; treasurer, William Davis—both St. Elmo, Colo.; offices St. Elmo, Colo.; owns the Stanley, Tom Ewing, and Ben Franklin lodes, 1500x300 feet each; situated on the east slope of Pomeroy Mountain, Chalk Creek Mining district, two and one-half miles from St. Elmo; located in 1880, and in process of patenting; fissure veins, with crevices from four to twelve feet in width, and pay streaks from six to twenty inches of quartz, galena, and copper, which mill-runs, when sorted, two ounces gold and thirty ounces silver per ton; developed by a tunnel 444½ feet in length, and a shaft seventy feet in depth; output twelve tons per week.



**Steel Galena.**—I. N. Barrett, Isaac Anglemire, Harry Spencer, and A. D. Hinkle, all Buena Vista, Colo., owners; claim 1500x300 feet; situated at North Cottonwood, Cottonwood Mining district, eight miles from Buena Vista; located in 1882; fissure vein, with a crevice three feet wide, containing quartz and galena, with brittles and native silver and gray copper, which assays 800 ounces silver per ton; developed by an open cut fifteen feet long, with fifteen feet face.

**Stonewall and Kentucky.**—J. S. Halsey, New York, F. L. Martin, and Professor Kerr, both Colorado Springs, Colo., owners; manager, V. B. Reed, Hancock, Colo.; claims contain seventeen acres; situated on Mineral Hill, Chalk Creek Mining district, half mile from Hancock; located in 1879, and patented in 1881; fissure veins, with crevices fromtwo to four feet in width of quartz and galena, with some copper, which mill-runs when sorted, thirty per cent lead and twenty ounces silver per ton; developed by a shaft 150 feet in depth, and two cross-cuts forty feet in length each, worked by an engine twelve-horse-power; adjoining which claims are two mill sites of five acres each, owned by the same parties.

**Sugar Loaf Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Walter Scott; vice-president and treasurer, Dr. P. B. Purcell; secretary, J. W. Johnson; offices 380 Larimer street, Denver, and St. Elmo, Colo.; owns the Sugar Loaf Tunnel site, 3000x6 feet, on which a tunnel is being driven, designed to cut through the range from Poplar Gulch, and which will intersect the veins in the Herman, Little Nell, and several other claims; the Company also owns the Nellie Horden, Nos. 1 and 2, Pride of Texas, Nos. 3 and 4, Little Alice, Carrie R., Shepherd Extension, Big Indian Extension, Belle Mahone Extension, Annie Darling Extension, and Rob Roy Extension, 1500x300 feet each; situated at head of Poplar Gulch, in Chalk Creek Mining district; which will all be developed through the Sugar Loaf Tunnel; veins all fissures, with crevices from two to ten feet in width, containing quartz, galena, and suphurets, with iron and copper pyrites, carrying both gold and silver.

**Susquehanna and Lackawana.**—Charles Lydon, Alpine, Colo., and C. A. Clinton, St. Louis, Missouri, owners; claims 1500x300 feet each; situated on the east slope of Red Mountain and in Baldwin Gulch, Chalk Creek Mining district, five miles from Alpine; located 1879; veins both fissures, with crevices from two to four feet wide, containing quartz carrying galena, copper and iron pyrites, which mill-runs, when sorted, twenty-eight ounces silver per ton; developed by two shafts thirty and fifty feet in depth, respectively.

**Swipe's Boy and Silver Crop.**—L. M. Goddard, H. W. Dunning, D. A. Rice, and others, of Leadville, Colo., owners; claims 1500x300 feet each; situated on Pine Creek, LaPlata Mining district, twelve miles from Granite; located 1880, and in process of patenting; contact veins, containing galena and sulphurets in a quartz gangue, which assays twenty per cent lead, 115 ounces silver, and one-half ounce gold per ton; developed by a tunnel eighty-six feet in length and a shaft fifteen feet in depth.

**Theresa C.**—Darwin and Robert Ray, both Buena Vista, Nathan Ray and Thomas Henline, both Alpine, Colo., owners; claim 1500x300 feet; situated on Chrysolite Mountain and Murphy Hill, Chalk Creek Mining district; located 1880; vein a fissure, with a crevice seven feet wide of quartz and galena, with copper pyrites, which mill-runs, when sorted, twenty-seven ounces silver and two ounces gold per ton; developed by two shafts ten and forty-six feet in depth, respectively; output twenty tons.

**Three Brothers.**—Townsend Bros., Garfield, Colo., owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located 1882; vein a fissure, with a crevice three feet wide; ore—argentiferous galena in a quartz gangue; assays sixty-five ounces silver per ton; developed by a shaft thirty feet in depth.

**Thunderbolt.**—I. N. Barrett and others, of Buena Vista, Colo., owners; claim 1500x300 feet; situated on Clear Creek, Clear Creek Mining district, twenty-six miles from Buena Vista; located in 1881; vein a fissure, with a crevice five feet wide containing quartz and galena, which assays fifty ounces silver per ton; developed by a shaft twenty feet in depth.

**Tip Top.**—T. J. Hampson, C. W. Buck, and H. Zillhaver, owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1882; vein a fissure, with a crevice three feet wide; ore—native and brittle silver in a quartz gangue; assays sixty ounces silver per ton; developed by an open cut twelve feet in length.

**Tom Paine.**—1500x300 feet; situated at the head of Brown Creek, eight miles west of south from Alpine, Chalk Creek district; located in June, 1878; owners O. A. Hoffman, Rogerville; Wm. Mathewson, Wichita, Kas.; and Max Martin, Muncie, Ind.; vein a fissure, seven feet wide, of crystallized lead and iron pyrites in a quartz gangue, which assays thirty-five per cent lead, one and one-half ounces gold, and from thirty to sixty ounces silver per ton; developed by one sixty-foot shaft and one forty-foot tunnel.

**Topeka Tunnel.**—Owned by Wm. Coburn; the site is 3000x6 feet; situated in Baldwin Gulch and on the east side of Boulder Mountain, Chalk Creek Mining district; on which tunnel site has been located the Czar, Copper, and General Grant lodes, 1500x300 feet each; containing fissure veins four feet wide, each carrying galena and iron pyrites in a quartz gangue, which mill-runs, when sorted, from thirty to fifty ounces silver per ton.

**Valley.**—J. and J. Grundy, both Garfield, Colo., owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1881; vein a fissure, with a crevice three feet wide; ore—argentiferous galena in a quartz gangue; assays twenty-two ounces silver per ton; devleoped by a tunnel thirty-five feet in length.

**Vermont.**—John Shaw, John O'Hare, and G. W. Hull—all Leadville, Colo., owners; claim 1500x300 feet; situated on Twin Mountain and in Willis Gulch, Lake Creek Mining district, eleven miles from Granite; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak from six to thirty inches of quartz and galena, which assays thirty per cent lead and five ounces silver per ton; developed by two tunnels forty feet each in length and one twenty-foot incline.

**Victor Mining and Milling Company.**—Incorporated under the laws of Colorado, in August, 1881; capital stock $3,000,000, in 300,000 shares of $10 each; president, J. F. Tabor; secretary, John J. McGowan—both Leadville, Colo.; office rooms 4 and 5 Boston Block, Leadville, Colo.; owns eight claims, covering forty acres; situated at Cottonwood, Cottonwood Mining district, twelve miles from Buena Vista; ore—argentiferous galena; developments—eight shafts from twenty to ninety feet in depth each.



**War Eagle.**—Owned by J. T. Redmon; claim 1500x300 feet; situated on Princeton Mountain, Chalk Creek Mining district; vein a fissure, with a crevice three feet wide, containing black hematite iron in a quartz gangue matter, which assays three ounces gold and twenty ounces silver per ton; developed by a tunnel in the vein 163 feet in length.

**Warner Mining Company (The).**—President, C. R. Taylor; secretary and treasurer, J. J. Cone—both Detroit, Mich.; office Detroit, Mich.; owns the Gypsy Queen lode; situated three miles from Salida; located in 1881; fissure vein; ore—copper and gold in quartz; assays twenty per cent copper and $40 in gold per ton; developed by three shafts, 27, 30, and 110 feet in depth, respectively.

**Webounza Chief.**—H. J. Thomas, S. Skinner, and W. Weiss, owners; claim 1500x300 feet; situated in Camp Summit, Monarch Mining district; located in 1879; fissure vein, with a crevice six feet wide; ore—argentiferous galena in a quartz gangue; assays thirty-three ounces silver per ton; developed by a tunnel forty-five feet in length.

**White Mountain Tunnel.**—Owned by N. Gleason, J. M. Judah, S. B. Judah, W. B. Biddie, of La Porte and Indianapolis, Ind., and Noble B. Judah, Chicago, Ill.; the tunnel site consists of 3000x6 feet; situated on the east side of Baldwin's Gulch, Chalk Creek Mining district, on which a tunnel is driven intersecting two veins, upon which have been made locations 1500x300 feet each, viz., the White Mountain and Lincoln; the veins have crevices four feet in width, each containing galena in a quartz gangue, which assays from 75 to 150 ounces silver per ton.

**White Quail.**—William West, S. T. Ferrier, R. S. Lewis, Louis Franck, all Cañon City, Colo., owners; claim 1500x300 feet; situated on Texas Creek, Texas Creek Mining district, sixteen miles from Buena Vista; located in June, 1882; fissure vein, with a crevice three and one-half feet wide, and a pay streak of fourteen inches; assays from 100 to 18,000 ounces silver per ton; developed by a shaft ten feet in depth.

**Wide-Awake.**—I. N. Barrett, G. M. Thompson, William E. Hall, all Buena Vista, and Mrs. Charles Nathrop, Nathrop, Colo., owners; claim 1500x300 feet; situated on Jones Mountain, Cottonwood Mining district; located in 1882; fissure vein, with a crevice twenty feet wide, and a pay streak from six to twenty inches of quartz and galena, which, when sorted, assays an average of 100 ounces silver per ton; developed by a tunnel on the vein fifty feet in length and a cross-cut twenty feet in length.

**Wm. Toombs.**—H. T. Wright, J. Morton, and John Toms, owners claim 1500x300 feet; situated on Pomeroy Mountain, Chalk Creek Mining district; located 1880; fissure vein; ore—argentiferous galena in a quartz gangue; assays twenty ounces silver per ton; developed by shaft twenty feet in depth.

**Yale Mountain Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in May, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Juan F. Portuondo; vice-president, Hon. Chas. R. Earley; secretary, Lewis M. Supplee; treasurer, Stephen T. Litell—all Philadelphia, Pa.; superintendent, John

Greenback, Buena Vista, Colo.; offices 302 Walnut street, Philadelphia, Pa., and Buena Vista, Colo.; owns the Last Chance, Bucks, Delaware, and Westmoreland; situated on Yale and Sheep Mountains, Cottonwood Mining district, six miles from Buena Vista; veins all fissures, with crevices from two to twenty-five feet in width, and pay streaks from six to thirty inches of galena and copper pyrites in a quartz gangue, which mill-runs, when sorted, from $30 to $250 per ton in gold and silver; Last Chance is developed by tunnel 170 feet in length—the others have much less development; also owns an undivided one-half interest in the Mount Carmel lode, situated near Mount Yale, in South Cottonwood (see Mount Carmel); also owns two mill sites, one of five acres, near Last Chance lode, and one fifteen acres, at junction of Cottonwood Creek; on the latter the Company has erected a concentration and sampling mill, containing six Alden Crushers and Pulverizers, with elevator and rotary screen, and four Mitchell Concentrators; operated by an eighteen-horse-power engine, and has a capacity for treating seventy tons in twenty-four hours; assay-office, saw-mill, blacksmith-shop, etc., in connection with the works.

**Yankee Blade.**—300x1500 feet; situated in the Granite district; vein a well defined fissure, varying in width from one to three feet; developments consisting of three shafts, 265, 70, and 140 feet in depth, respectively, and 300 feet of levels, showing, in the workings near the surface, quartz carrying free gold, but as depth was gained sulphurets of iron with some copper and lead intermixed.

**Yellowstone.**—J. C. Wanner, Meyer Bros., Hancock and Alpine, Colo., owners; claim 1500x300 feet; situated on the east slope of Franklin Mountain, Chalk Creek Mining district, two miles from Alpine; located 1880; fissure vein, with a crevice four and one-half feet wide of quartz carrying galena, which mill-runs, when sorted, one-fourth ounce gold and twenty-five ounces silver per ton; developed by shaft sixty feet in depth and tunnel 350 feet in length.

**Zephyr Mining Company (The).**—Incorporated under the laws of New York; capital stock $1,250,000, in 250,000 shares of $5 each, non-assessable; president, C. H. Emerson; vice-president and treasurer, R. G. Page; secretary, J. H. Kidder—all New York City; general manager, E. R. Emerson, Buena Vista, Colo.; offices 197 Broadway, New York City, and Garfield, Colo.; owns the Zephyr, Bonnie Belle, and Ben Hill lodes, 1500x300 feet each; situated in the Monarch Mining district; veins are fissures, with crevices from four to eight feet in width, and pay streaks from three to ten inches containing galena and iron pyrites in a quartz gangue, which assays one and one-half ounces gold and forty ounces silver per ton; developed by two shafts 76 and 150 feet in depth, respectively, and two tunnels, twenty and thirty-five feet in length, respectively.




# Clear Creek County.

This County is situated east of the Continental Divide, adjoining Gilpin on the south and Jefferson County on the west. It has an area of 437 square miles, and an estimated population of 11,000.

Its territory is almost exclusively devoted to the pursuit of mining, there being only a few strips of tillable land within its limits. The geological formation is simple, and may properly be described as granitic in its general features—embracing all the diversified forms of the granitic series, from the true massive granite through all the gneissic grades down to the highly stratified mica schist, with occasional patches and dikes of the eruptive varieties here and there in different sections. The veins are principally fissures, having a strike approximately north-east and south-west; though there are isolated cases where the strike is nearly north and south, and others again almost east and west.

The County has been quite thoroughly prospected, it being one of the earliest mining sections in the State—and its mines are considerably developed. Valuable lodes bearing gold and silver, and in many instances both of these metals, are found in nearly all the districts; some of which have been worked to a greater or less extent since 1859. Its output from 1859 to 1864, inclusive, was $2,000,000; from 1865 to 1868, inclusive, $182,823; in 1869, $400,354; in 1870, $481,354; in 1871, $869,046; in 1872, $1,503,391; in 1873, $1,259,761; in 1874, $2,203,947; in 1875, $1,928,161; in 1876, $1,982,544; in 1877, $2,206,577; in 1878, $2,261,105; in 1879, $1,967,000; in 1880, $2,994,728; in 1881, $2,204,980; and in 1882, $2,001,629; or a total output to January 1, 1883, of $26,447,400.

From 1859 to 1864 the yield was almost wholly derived from the placers, and from the decomposed surface-ores of the gold veins, the silver mines not having been operated till 1865—the most noteworthy discovery of which occurred in the vicinity of Georgetown in the fall of 1864—some of which have been successfully and constantly worked, with a steadily increasing output, from that time to the present At best, however, the district has been only skimmed, very few of the veins having been penetrated to the water-level of the mountain streams. In addition to the older discoveries, several new ones have been made and somewhat developed; creating new sources of wealth, and furnishing a large portion of the bullion crop. The deeper mines, as a rule, show no diminution in the quality or quantity of their ores, the latter being silver—usually carried in the gray, yellow, and purple sulphurets of copper—lead, zinc, and bismuth sulphides, with small proportions of ruby silver, native silver, etc., intermixed.

Empire District was settled in 1861, and was the scene of considerable excitement for three or four years later, owing to the gains derived from sluicing the surface dirt on the slopes about North Empire. Owing, however, to the low grade of the ores, which are almost wholly auriferous, it has for some years been an insignificant factor in the production of the precious metals; but with the introduction of large and well constructed mills, with processes for cheap roasting and amalgamation, it would probably very soon attain an exalted standing among the productive sections of the State.

Montana District, with the exception of the Murray, Columbian Chief, Jo Reynolds, and Pride of the West, has no developed properties. The ores are usually argentiferous, and the veins generally large. The mineral is to a considerable extent scattered through the entire gangue-matter of the veins, which prevents the miners from shipping to market after deducting the cost of transportation and shipment.

Downeville District, which includes Red Elephant Mountain and vicinity, has a number of valuable and productive mines; but even these properties have yielded only a small portion of what might have been realized through a broader system of development and supervisory direction.

Morris and Trail Run Districts have some important properties, which have considerable development and show a good grade of ore; while the Idaho District has been somewhat inactive, but a noted strike recently made furnishes evidence that there will be a better condition of things in the future.

**A. B. C.**—(See Copper Botlom.)

**A. T. Stewart.**—D. W. Glaze, Georgetown, Colo., owner; claim 1500x150 feet; situated on Democrat Mountain, Upper Union Mining district, two miles from Georgetown; located in 1874, and patented; vein a fissure, with a crevice thirty feet wide ,and a pay streak varying in width from six to twelve inches of galena and silver glance in a quartz gangue, which mills when sorted, from 50 to 300 ounces silver per ton; developed by two tunnel 100 and 300 feet in length, respectively.

**Adrian Tunnel Group.**—Nathan S. Crane and Richard J. Harkness, both Dumont,Colo.,owners; group comprises the Adrian Tunnel, 3000 feet, Columbian Squaw, Garfield, N. S. R. C., S. C., 1500x150 feet each, Tunnel Lode No. 1, Columbian Chief, 200x150 feet; all situated on Columbian Mountain, Montana Mining district, at Lawson; veins all fissures, with crevices averaging three feet in width; ore--carbonates of copper and gray copper in a quartz gangue; assays from 100 to 800 ounces silver per ton; developments—a tunnel 120 feet in length is driven on the tunnel site, and assessment work is done on all the other lodes.

**Ætna.**—Wm. Heywood and Fanny P. Marsh, both Georgetown, Colo. owners; claim 3000x50 feet; situated on Griffith Mountain, Griffith Mining district, near Georgetown; located in 1867, and patented; vein a fissure, with a crevice fifteen feet wide, and a pay streak six inches wide of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, fifty ounces silver per ton; developed by four adits, aggregating 550 feet in length.

**Alamosa Group.**—C. T. Bellama and Thomas B. Early, both Georgetown, Colo., owners; group embraces four claims, 1500x150 feet each situated on Columbian Mountain, Montana Mining district, near Lawson; located in 1881; veins all fissures, with crevices from four to six feet in width, and pay streaks from three to twenty inches of galena in a quartz gangue, which mill-runs, when sorted, from 50 to 175 ounces silver per ton; developed by a shaft sixty feet in depth and levels sixty feet in length; output $2,000.

**Alaska.**—John A. Fish and Henry Seifreid, both Georgetown, Colo. owners; claim 1500x150 feet; situated on Griffith Mountain, Griffith Mining, district, at Georgetown; located in 1880; vein a fissure, with a crevice thirty feet in width, and a pay streak from ten to fifteen inches of argentiferous galena and copper pyrites in a quartz gangue, which assays from 20 to 140 ounces silver per ton; developed by adits aggregating 160 feet and a shaft twenty-five feet in depth.



**Albro Gold and Silver Mining Company (The).**—Owns the Lincoln Tunnel, 3000x6 feet, and the California, Nevada, Arizona, and Mill City lodes, 1500x150 feet each; all situated on Albro Mountain, Morris Mining district; veins all fissures, with crevices from three to six feet in width; ore—iron and copper pyrites, in a quartz gangue, carrying gold and silver; developments—one tunnel 550 feet in length and winze seventy-five feet from mouth of tunnel.

**Albro Group.**—W. H. Price, Denver, Colo., and Geo. M. Drake, Dumont, Colo., owners; group comprises the following lodes, viz.: Albro, 400x 50 feet, Veta, Madra, and Zacatecos, 1500x150 feet each; situated on Albro Hill, Morris Mining district, three-fourths of a mile from Dumont; patented 1879; veins all fissures, with a crevice in the Albro from five to twenty feet in width, and a pay streak from eighteen inches to five feet in width; ore, iron and copper pyrites and galena in a quartz gangue, carrying gold and silver; mill-runs $150 net per ton, after sorting; developed by a shaft 235 feet in depth. and levels aggregating 2,000 feet; there is ore enough in sight to ship 300 tons per month for several years; worked by a thirty-horse-power engine.

**Alexander.**—J. E. Dubois and Alexander Cooper, both Dumont, Colo., owners; claim 1500x150 feet; situated on Keith Mountain, Morris Mining district, one mile from Dumont; located in 1872, and patented in 1881; vein a fissure, with a crevice five feet in width, and a pay streak from ten to thirty inches; ore, copper pyrites and galena in a quartz gangue; assays $150 in gold and silver per ton; developed by a shaft 120 feet in depth and a tunnel 200 feet in length.

**Amazon.**—J. H. Wrampelmeier, Louisville, Ky., John S. Gillmore, Moline, Ill., Jesse Gillman, Idaho Springs, Colo., owners; claim 1500x150 feet; situated on Seaton Mountain, Idaho Mining district, one and one-half miles from Idaho Springs; located 1862, and patented 1880; vein a fissure, with a crevice three feet wide; ore—gray copper in a quartz gangue; mill-runs from $40 to $100 per ton; developed by a shaft 200 feet in depth and 200 feet of drifts.

**Amazon.**—David Hill and John McIntosh, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, three miles from Georgetown; located in 1876; vein a fissure, with a crevice five feet wide, and a pay streak from six to twelve inches of galena in a quartz gangue, which assays 200 ounces silver per ton; developed by a tunnel 200 feet in length.

**American Eagle.**—Geo. R. Squires, C. H. Putnam, J. M. Borders,, all Dumont, Colo., and J. F. Mullins and B. F. Smith, both Denver, Colo., owners; claim 1500x150 feet; situated on Capital Mountain, Montana Mining district, one mile from Dumont; located in 1878; vein a fissure, with a crevice two and one-half feet in width, and a pay streak from two to eight inches; ore—argentiferous galena in a quartz gangue; assays seventy-five ounces silver per ton; developed by a shaft eighty feet in depth and sixty feet of drifting.

**Andrew Lowe.**—75x750 feet; situated on the west slope of Ohio Mountain, two and one-half miles from Mills City, and patented in 1874; owners George E. and Rufus H. Snider, both Denver; vein a fissure from two to six feet wide of gold-bearing quartz and galena; developments—two drifts fifty and seventy feet long, respectively, and a series of openings on the vein.

**Annie Douglass.**—J. W. La Munyon, Dumont, Colo., and John La Munyon, Sidney, Nevada, owners; claim 1500x150 feet; situated in Downieville Mining district, two miles from Dumont; located in 1882; vein a fissure,

with a crevice four feet in width, and a pay streak eleven inches in width; ore—gray copper in a quartz gangue; mill-runs on first-class ore 211 ounces, on second-class seventy-five ounces, and on third-class forty ounces silver per ton, after sorting; developed by a shaft twenty-seven feet in depth. Ore enough has been taken out of the property to pay for development already done.

**Argentine.**—Situated on Leavenworth Mountain, about three miles from Georgetown, Griffith district, and located in 1875; vein a fissure from four to six feet wide, pay streak from ten to twenty inches, milling, when sorted from the gangue-matter, from 100 to 300 ounces silver per ton; the developments consisting of one shaft, with levels running therefrom, and a tunnel cutting the vein at a depth of sixty feet; some shipments of ore were made in 1882.

**Argo Mining and Milling Company (The).**—Incorporated under the laws of Colorado in 1883; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, George S. Merrill, Lawrence, Mass.; vice-president, J. J. Elliott, Idaho Springs, Colo.; treasurer, H. B. Pierce; secretary, J. W. Gore—both Boston, Mass.; general manager, J. V. W. Vandenburgh, Idaho Springs, Colo.; offices 33 Milk street, Boston, Mass., and Idaho Springs, Colo.; owns the Argo lode, 1500x150 feet; situated at Bullion Camp, Cascade Mining district, six and one-half miles from Idaho Springs; located in March, 1882; vein a fissure, with a crevice twenty-seven feet in width, and a pay streak from eight to thirty inches in width; ore—galena, brittle silver, and gray copper in a quartz gangue; mill-runs $100 net per ton, after sorting; developed by a shaft fifty-six feet in depth; output $1,500.

**Arizona.**—(See Ontario.)

**Arizona Group.**—Consisting of the Arizona, No Name, Hawkeye, Simon Kenton, and Venice lodes; E. W. Williams & Co., Russell Gulch, owners; claims 1500x150 feet each; situated at head of Elk Horn Gulch, on Pewabic Mountain, in Pleasant Valley and Idaho Mining districts, three miles from Central City; located between 1866 and 1880; Arizona and Hawkeye patented; ore—argentiferous galena and gray copper in a quartz gangue; mill-runs from 50 to 125 ounces silver per ton, after sorting; width of veins from one to eight feet; developed by four shafts from 90 to 130 feet in depth; output $1,000.

**Arthur.**—1500x150 feet; situated on Chicago Creek, Freeland district; located June, 1881; owners Alexander Johnson, Chihuahua, Albert Jones and George Marshbanks, both Idaho Springs; vein a fissure eight feet wide; pay streak ten inches of gold-bearing quartz carrying wire silver, which assays from $100 to $500 per ton; developed by one twenty-foot shaft.

**Ashford.**—(See Home Base.)

**Atlantic.**—J. Dreifurst, W. Ebert, Benjamin Werner, and John Bernhardt, all Georgetown, Colo., owners; claim 1270x50 feet; situated on Brown Mountain, Queen's Mining district, three miles from Georgetown; located in 1872, and patented; vein a fissure, with a crevice from two to seven feet wide, and a pay streak from one to nine inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 100 to 200 ounces silver per ton; developed by two tunnels 260 and 298 feet in length, respectively, connected by drifts aggregating 1,400 feet, and shafts 300 feet in depth; output $50,000.

**Atlantic-Pacific Tunnel Company (The).**—Incorporated under the laws of Colorado; capital stock $7,000,000, in 700,000 shares of $10 each, non-assessable; president, M. M. Pomeroy; vice-president, L. C. McKenney; secretary and treasurer, A. S. Whitaker—all Denver, Colo.; office 433 Larimer street, Denver; own a tunnel site running through the main range of the Rocky Mountains from the base of Mount Kelso, in Clear Creek County, to Decatur, in Summit County, a distance of 25,200 feet, on which a tunnel is now driven over 1,500 feet from the Clear Creek side, intersecting four large fissure veins containing quartz and galena, some of which runs high in silver and lead; it is estimated that it will cut 200 well defined fissure veins in its entire length, besides numerous blind leads.



**Baldwin Mining and Milling Company (The).**—Owns the Margaret and Sequel lodes, 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district, two miles from Georgetown, and patented; veins both fissures, with crevices five feet wide, each carrying quartz, galena, and gray copper intermixed, which mill-runs, when sorted, from 200 to 300 ounces silver per ton; developed by three tunnels ranging from 350 to 500 feet in length each.

**Baltimore Tunnel Mining Company (The).**—Offices Georgetown; owns the Baltimore Tunnel property, 1500x50 feet; situated on Brown Mountain, at Brownville, and about three miles from Georgetown, Griffith district; vein a fissure, with a crevice thirty inches wide, containing a vein-matter of quartz and an ore of galena, copper pyrites, and zinc blende, milling, when sorted from the gangue-rock, from 100 to 300 ounces silver per ton; the developments consisting of one shaft about 250 feet deep, with considerable levels, and a tunnel 800 feet long, and although the Company's operations have of late been somewhat cimcumscribed by litigation wth adjacent claimants, it has been one of the most productive properties in the county.

**Baxter.**—Church Bros. & Baxter, Georgetown, Colo., owners; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, two miles from Georgetown; vein a fissure, with a crevice varying in width from four to twenty-five feet, and a pay streak from three to ten inches of galena, gray copper, and sulphurets in a quartz gangue, which mill-runs, when sorted, from 150 to 200 ounces silver per ton; developed by three shafts aggregating 800 feet and tunnel seventy-five feet in length.

**Belmont.**—Israel Statts, Greeley Colo., owner; Clarence K. Colvin, Idaho Springs, manager; claim 1500x300 feet; situated at Freeland, Trail Run Mining district, four and one-half miles from Idaho Springs; vein a fissure eight feet wide, and pay streak two feet; ore—argentiferous galena and copper pyrites in a quartz gangue, which mill-runs, when sorted, from $40 to $60 per ton; developed by three shafts twenty feet each in depth, and one adit forty feet in length.

**Benjamin H. Hill.**—J. L. Landis, Georgetown, Colo., owner; claim 1500x150 feet; situated on Saxton Mountain, Griffith Mining district, near Georgetown; vein a fissure, with a crevice from four to six feet wide, and a pay streak from four to eight inches of gold and silver bearing quartz, which assays two ounces gold and twenty-five ounces silver per ton; developed by a tunnel sixty feet in length.

**Benton.**—D. J. Ball, Empire, Colo., Albert Johnson and Henry Thomas, both Denver, Colo., owners; claim 1500x150 feet; situated at North Empire, Upper Union Mining district; patented in 1877; vein a fissure, with a crevice five feet in width, and a pay streak from one to three feet; ore—iron and copper pyrites in a quartz gangue carrying gold; mill-runs three ounces gold per ton, after sorting; developed by a shaft 140 feet in depth and a drift from bottom of shaft 140 feet in length.

**Big Blue Group.**—George L. Sites, Georgetown, Colo., owner; group comprises the Big Blue, Good Hope, Last Chance, Negotia, and two other lodes, 1500x150 feet each; situated on Leavenworth Mountain, Griffith Mining district, two miles from Georgetown; located from 1870 to 1879; veins all fissures, with crevices from two to ten feet in width, and pay streaks from one to sixteen inches of argentiferous galena, silver glance, and gray copper in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by tunnels aggregating 900 feet, shafts aggregating 600 feet, and levels aggregating 1,300; output $200,000.

**Big Gun.**—David M. De Witt, Georgetown, owner; claim 1500x150 feet; located in 1876; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; vein a fissure four feet wide, pay streak from two to four inches; developments—one shaft thirty feet in depth; reached by tunnel at a distance of 300 feet from the mouth, and intersected at a depth of 165 feet.

**Bismarck Group.**—George W. Cox, James McNasser, George A. Cole, and others, Georgetown, Colo., owners; group comprises the Bismarck, Cataract, and McLinn lodes, 1500x150 feet each; situated on Sherman Mountain, Griffith Mining district, two miles from Brownville and four miles from Georgetown; located in 1866, and all patented; veins all fissures, with crevices from three to twelve feet in width, and pay streaks from four to twenty inches in width of iron pyrites, galena, gray copper, and zinc blende in a quartz gangue, which mill-runs, when sorted, from 100 to 150 ounces silver per ton; developed by a tunnel 162 feet in length and levels aggregating 1,500 feet.

**Blue and Snyder.**—H. C. Snyder, N. Mandall, and H. Benter, all Chihuahua, Colo., owners; claims 1500x150 feet each; situated on the northwest slope of Irwin Mountain, Argentine Mining district, eighteen miles from Georgetown; located July 27, 1881; vein a fissure, with a crevice six feet wide, and a pay streak from four to seven inches of black sulphurets and antimonial silver in a quartz gangue, which assays from 220 to 440 ounces silver per ton; developed by two levels twelve and ninety feet in length, respectively, and a tunnel sixteen feet in length.

**Bohemian Lode and Tunnel.**—Wm. B. Hood, Georgetown, Colo., owner; lode claim 1500x600 feet and tunnel site 3000x6; situated on Democrat Mountain, Griffith Mining district, at Georgetown, Colo.; located in 1879; vein a fissure, with a crevice twenty-five feet wide, and a pay streak from four to twenty inches of galena and copper in a quartz gangue, which assays twenty-five per cent copper and sixty ounces silver per ton; developed by a tunnel 214 feet in length.

**Bonanza Tunnel.**—P. McNulty, Anthony Jordan, John Cain, and B. O'Connell, all Georgetown, Colo., owners; claim 3000x6 feet; situated on the west slope of Democrat Mountain, Upper Union Mining district, three miles from Georgetown; located 1877; on which a tunnel is driven 500 feet in length, opening up the Jordan and Hayes lodes, on which claims are located 1500x150 feet each, and which have four feet of crevice-matter and from six to twelve inch pay streaks containing galena in a quartz gangue, which mill-runs, when sorted, 150 ounces silver per ton; output $3,000.

**Bonn.**—(See Great West.)

**Bonnie Bess.**—O. T. Sparks and P. C. Hanson, both Nevadaville, Colo., owners; claim 1500x150 feet; situated at Camp Clifford, York Mining district; located 1880; vein a fissure, with a crevice three feet in width; ore—argentiferous galena and silver glance in a quartz gangue; assays seventy-two ounces silver per ton; developed by shaft thirty feet in depth.



**Boss.**—H. C. Cawles & Co., Empire, Colo., owners; claim 1500x150 feet; situated on Silver Mountain, Upper Union Mining district; vein a fissure; ore—iron pyrites in a quartz gangue carrying gold; assays four ounces gold per ton; developed by tunnel 100 feet in length.

**Brighton.**—James Q. Hall and T. A. McCann, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Argentine Mining district, two miles from Georgetown; located 1882; vein a fissure, with a crevice forty feet wide, and a pay streak from four to six inches of galena in a quartz gangue, which assays thirty per cent lead and 100 ounces silver per ton; developed by tunnel 300 feet in length, and two drifts forty and eighty feet in length, respectively.

**British Queen Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Howard Burgin; secretary, P. W. Janeway; treasurer, Wm. Dunlap—all Philadelphia, Pa.; superintendent, Frank P. Rosengarten, Georgetown, Colo.; offices 125 Twenty-third street, Philadelphia, Pa., and Georgetown, Colo.; owns the Baker, Argentum, Grace H, Bell, Compromise, Standard, Elma, and Burgin, 1500x150 feet each; situated on east slope of Kelso Mountain, West Argentine Mining district, four miles from Bakerville and twelve miles from Georgetown; located 1864, and all claims patented except Burgin; veins all fissures, with crevices from five to twenty feet in width, and pay streaks averaging sixteen inches of argentiferous galena, sulphurets, and yellow copper in a quartz gangue, which mill-runs, when sorted, from 100 to 500 ounces silver per ton; developed by four levels from 50 to 400 feet in length, all connected by 200 feet of shafting; output over $500,000; also owns a mill site of five acres near the Elma lode and the town site of Bakerfield, containing twenty acres.

**Broadway.**—A. Libby, W. O. Farris, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Douglas Mountain, Griffith Mining district, four miles from Georgetown; located in 1881; vein a fissure, with a crevice eighteen inches wide, and a pay streak of ten inches of galena in a quartz gangue, which mill-runs, when sorted, eighty ounces silver per ton; developed by a shaft 50 feet in depth.

**Brooklyn Consolidated Mining Company (The).**—(Unincorporated,) composed of James McQuade and H. W. Slocum; manager, Henry Fulton; offices New York City and Georgetown, Colo.; owns the Snowdrift lode, 1400x50 feet; located 1863, and patented; situated on Republican Mountain, Griffith Mining district, near Silver Plume, and two miles from Georgetown; vein a fissure four feet in width, pay vein nine inches; nature of ore—galena and sulphurets in a quartz gangue, which mills, when sorted, 1,000 ounces silver per ton; developments—main shaft 550 feet deep, one tunnel 568 feet in length, which intersects the vein at a depth of 280 feet, and six levels, aggregate length 1,900 feet; total yield $140,000.

Also owns the Daniel Peters lode, 1400x50 feet; located 1863 and patented; situated on Republican Mountain, Griffith Mining district, near Silver Plume, and two miles from Georgetown; vein a fissure sixteen feet in width, pay vein eight inches; nature of ore—sulphurets in a quartz gangue; average value, after sorting, 250 ounces silver per ton; developments—main shaft eighty feet deep, and two levels, aggregate length 560 feet.

**Brunswick.**—Owners H. N. Moore, Wm. Luther, John A. Fish, M. McCrimman, and Alexander Harlson, all Georgetown, Colo.; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, one mile from Silver Plume; located in 1881, and patented; vein a fissure, with a crevice ten feet wide, and a pay streak from three to twelve inches of galena, gray copper, silver glance, and native silver in a quartz gangue, which assays from 80 to 500 ounces silver per ton; developed by an adit sixty feet in length and a shaft twenty feet in depth.

**Buckeye State.**—Owners L. H. Sheppard, O. H. Sheppard, Eugene Rogers, and Z. B. Sawyer, all Georgetown, Colo.; claim 1500x150 feet; situated on Democrat Mountain, Griffith Mining district, two miles from Georgetown; located in 1879; vein a fissure, with a crevice two feet wide, through which is scattered galena, which assays fifty ounces silver per ton; developed by adits aggregating 175 feet in length.

**Bullion Smelter.**—John M. Dumont and Geo. G. Vivian, both Freeland, Colo., owners; works situated at Freeland; contain two reverberatory furnaces, and machinery for calcining and desulphurizing ore, and have a capacity for treating thirty tons of ore in twenty-four hours.

**Bullion Tunnel Company (The).**—President, S. L. DeLong; secretary, M. J. Fitzgerald—both Denver; superintendent, Thomas Egan, Silver Plume, Colo.; offices Denver and Silver Plume, Colo.; owns two claims, 1500x150 each; situated on McClelland Mountain, Griffith Mining district, two miles from Georgetown; located in 1880, and partially patented; veins both fissures, with crevices from eight to thirty feet wide, and pay streaks from eight to fifteen inches of galena in a quartz gangue, which mill-runs, when sorted, fifty ounces silver per ton; tunnel site is developed by a tunnel 260 feet in length, designed for the working of both lode claims.

**Burleigh Mining Company (The).**—Incorporated under the laws of Massachusetts; capital stock $400,000; offices Georgetown, Colo., and Fitchburg, Mass.; president, Charles H. Burleigh; superintendent, Colonel Ivers Philips; owns the Burleigh Tunnel property, comprising a tunnel claim, 1500x3000 feet, with thirty acres of ground for mill and building sites, all of which is patented; length of tunnel 2,300 feet; situated at the base of Sherman Mountain, Griffith Mining district, near town of Silver Plume, and three miles from Georgetown.

**Burlington and Colorado Silver Mining Company (The).**—Incorporated under the laws of Iowa and Colorado, April, 1876; capital stock $300,000, in 3,000 shares of $100 each, non-assessable; president, treasurer, and general manager, Joseph Reynolds, Chicago, Ill.; vice-president, R. T. Root; secretary, George W. Sweeney—both Burlington, Ia.; foreman, Warren M. Fletcher, Georgetown, Colo.; offices 97 Washington street, Chicago, Ill., and 120 Main street, Georgetown, Colo.; owns the Queen of the West lode, 900x50 feet; situated on Democrat Mountain, Upper Union Mining district; located in 1874, and patented; vein a fissure, with a crevice thirty feet wide, containing quartz carrying galena and sulphurets, which mill-runs, when sorted, from 100 to 200 ounces silver per ton; developed by three tunnels, 200, 400, and 500 feet in length, respectively; output $75,000.

**Burrell.**—James Burrell and estate of Wm. Bement, New York, owners; claim 1500x150 feet; situated on Burrell Hill, Griffith Mining district, near Georgetown; located in 1861, and patented in 1870; vein a fissure, with a crevice from one and one-half to five feet in width; ore—galena, ruby silver, gray copper, silver glance, zinc blende, and iron pyrites in a quartz gangue, carrying gold, which assays five ounces gold and 100 ounces silver per ton; developed by a shaft 100 feet in depth and 200 feet of open cuts.



**Caledonia.**—John Coburn, Lawson, Colo., and Chas. P. Baldwin, Georgetown, Colo, owners; claim 1500x150 feet; situated on Caledonia Mountain, Morris Mining district, three-fourths mile from Dumont; patented 1879; vein a fissure, with a crevice from five to twenty feet wide, and a pay streak one and one-half feet in width of iron and copper pyrites in a quartz gangue, carrying gold and silver, which mill-runs, when sorted, one and seven-eighths ounce gold and thirty-five ounces of silver per ton; developed by three shafts, ten, eighteen, and thirty feet in depth, respectively.

**Caledonia.**—Anthony A. Davis and Benjamin Brown, both Georgetown, Colo., owners; claim 1500x150 feet; situated on McClelland Mountain, Argentine Mining district, eight miles from Georgetown; located 1882; vein a fissure, with a crevice eighteen inches wide, and a pay streak of three and one-half inches of galena and gray copper in a quartz gangue, which assays 150 ounces silver per ton; developed by tunnel twenty feet in length.

**Calypso and Hornet.**—Two claims, 1500x150 feet; situated on the north slope of McClelland Mountain, three and one-half miles from Decatur, Argentine district; located August, 1882; owners I. B. Hewitt and W. F. Rowen, both Decatur; veins both fissures, four feet wide each, containing galena, gray copper, iron, and quartz, which assays from 100 to 750 ounces silver per ton; developed by two adits twelve feet long each.

**Captain Jack.**—J. G. Stevenson, C. Pearson, and M. P. Livensberger, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Griffith Mountain, Griffith Mining district, one-half mile from Georgetown; located 1881; vein a fissure, with a crevice six feet wide, and a pay streak eight inches of galena and yellow copper in a quartz gangue, which assays twenty per cent lead and thirty ounces silver per ton; developed by two tunnels 30 and 100 feet in length, respectively.

**Captain Wells and Savage.**—Owned by Charles P. Baldwin and William T. Raynolds, both Georgetown; claims 1000x50 feet each, and patented; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; vein a fissure eight feet wide, pay vein from one to fifteen inches of galena, porphyry, and zinc blende; average value of first-class ore 400 ounces, second-class ore 200 ounces, and third-class ore 50 ounces silver per ton, when sorted; developments—one main shaft 400 feet deep, other shafts aggregating 120 feet, and one level 250 feet in length.

**Careless Group.**—Comprising the Careless, Freeman, and Black Lion; P. Morris and M. J. McKinley, both Idaho Springs, Colo., owners; claims 1500x150 feet each; situated on Ute Creek, Cascade Mining district, six miles from Idaho Springs; located 1880; fissure veins, with crevices varying from four to ten feet in width, and pay streak from six to twelve inches of argentiferous galena and sulphurets in a quartz gangue, which assays 361 ounces silver per ton; Careless developed by an adit on the vein forty feet long, and a shaft thirty-five feet in depth; Black Lion by a shaft twenty feet in depth.

**Carwed.**—John Lloyd, John Thomas, and Frank Sanders, all Georgetown, Colo., owners; claim 1500x150 feet; situated on east slope of Gray's Peak, West Argentine Mining district, fourteen miles south-west of Georgetown; located August, 1882; vein a fissure, with a crevice five feet in width, containing argentiferous galena in a quartz gangue, which assays sixty ounces silver per ton; developed by a tunnel twenty five feet in length.

**Cascade Mining Company (The).**—Incorporated under the laws of New York in 1876; capital stock $300,000, in 30,000 shares of $10 each, non assessable; president, James M. Leavitt; vice-president, J. Warren Brown;

treasurer, Nathaniel A. Boynton; secretary, L. A. Atwood—all New York city; offices 62 Broadway, New York City, and Georgetown, Colo.; owns the Cascade lode, 1500x150 feet; situated on Charter Oak Ridge and on Chicago Creek, Cascade Mining district; located 1868, and patented; vein a fissure, with a crevice from ten to twenty-five feet in width, in which appears pockets of ruby and native silver, gray copper, and sulphurets in a quartz gangue, which mill-runs, when sorted, from 90 to 500 ounces silver per ton; developed by a tunnel 700 feet in length, which cuts the vein at a depth of 400 feet from the surface, with some drifting and stoping.

**Cash.**—N. A. Olson and D. A. Delaney, both Red Elephant, Colo., owners; claim 1500x150; situated on Red Elephant Mountain, Downieville Mining district; patented 1878; vein a fissure, with a crevice eight feet in width, and a pay streak four inches of argentiferous galena in a quartz gangue, which mill-runs, when sorted, 170 ounces silver per ton; developed by a tunnel 400 feet in length, and some drifting and stoping.

**Cashier.**—Margaret Callery, New York City, owner; claim 1500x150 feet; situated on Cavode Mountain, Upper Union Mining district, at Empire; located in 1860; vein a fissure, with a crevice four feet wide, and a pay streak from three to twelve inches of iron and copper pyrites in a quartz gangue, both carrying gold, which mill-runs, when sorted, eight ounces gold per ton; developed by tunnel 180 feet in length and some drifting.

**Cashier Silver Mining Company (The).**—Offices Boston, Massachusetts, and Georgetown, Colo.; owns the West Cashier, a patented claim 700 feet long, and situated on the Brown's Gulch slope of Sherman Mountain, at Brownsville, and about three miles from Georgetown; vein a fissure from five to ten feet wide, pay streak from four to ten inches of galena, gray copper, and zinc blende in a quartz gangue, milling, when sorted, from $50 to $100 per ton; the developments consisting of two shafts aggregating about 350 feet in depth, and considerable levels.

**Cashier.**—(See Little Mack and Cashier.)

**Cedar Rapids.**—Duncan McArthur, Georgetown, Colo., owner; claim 1500x150 feet; situated on Democrat Mountain, Upper Union Mining district, two and one-half miles from Georgetown; located in 1876, and patented; vein a fissure, with a crevice six feet wide, and a pay streak from four to twenty inches of argentiferous galena in a quartz gangue, which assays 150 ounces silver per ton; developed by a shaft fifty feet in depth.

**Central America.**—Nathan S. Crane and Philip Robinson, both Dumont, Colo., owners; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district, at Lawson; located in 1876; vein a fissure, with a crevice three feet in width, and a pay streak of ten inches of argentiferous galena and sulphurets in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by an adit on the vein 100 feet in length, and a shaft thirty feet in depth.

**Champion Comstock Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Peter Himrod; secretary, S. R. Pinkney; treasurer, Orson Breed—all New York City; agent, Silas Hanchett, Empire, Colo; offices 30 Vesey street, New York City, and Empire, Colo.; owns the following lodes, viz.: Champion Extension, Champion Dirt, Comstock, and Summit, containing, in all, sixteen acres of patented ground; situated on Kelly Mountain, Trail Run Mining district, two and one-half miles from Idaho Springs; veins all fissures, with crevices from one to four



feet in width, and pay streaks from ten to eighteen inches in width of iron and copper pyrites and galena in a quartz gangue, carrying gold and silver, which mill-runs, when sorted, from two to twelve ounces gold per ton; developed by three tunnels, 108, 175, and 250 feet in length, respectively, with considerable drifting, and two shafts sixty feet deep each.

**Champion and Hawkeye.**—A. Sweeney, P. Sweeney, Thomas Howard, and James Englen, all Chihuahua, Colo., owners; claims 1500x150 feet each; situated on the eastern slope of Irwin Mountain, Argentine Mining district; located June, 1881; veins all fissures, with crevices from one and one-half to six feet in width each, and pay streaks from three to six inches of galena, copper, and zinc in a quartz gangue, which assays twenty per cent lead and from 80 to 240 ounces silver per ton; developed by four shafts twelve feet each in depth.

**Charles Sumner.**—Alex Johnson, Chihuahua, and Albert Jones, Idaho Springs, owners; claim 1500x150 feet; situated on the east slope of Seaton Mountain, one and one-half miles from Idaho Springs, Idado district; located August, 1878; vein a fissure eight feet wide, pay streak eight inches of gold-bearing quartz, which assays from $50 to $75 per ton; developed by one drift sixty feet long and two shafts forty and twenty feet in depth, respectively

**Chihuahua.**—(See Dead Jack.)

**Choctaw.**—John Toomey and Thomas Barnes, both Georgetown, Colo., and T. F. Cherry, Baltimore, Maryland, owners; claim 1500x150 feet; situated on Anglo-Saxon Mountain, three miles from Georgetown; located in 1879, and patented; vein a fissure, with a crevice twenty feet wide, and a pay streak from five to twenty inches of galena in a quartz gangue, which mill-runs, when sorted, from 50 to 100 ounces silver per ton; developed by two cross-cuts 75 and 250 feet in length, respectively, and a tunnel 300 feet in length; output $10,000.

**City Grove.**—Owners Charles and Horace Bullock, R. G. Buchanan, and Stephen Edwards, all Georgetown, Colo.; claim 1500x150 feet; situated on Griffith Mountain, Griffith Mining district, at Georgetown; located in 1882; vein a fissure, with a crevice eighteen feet wide, and a pay streak from four to twelve inches of iron pyrites and galena in a quartz gangue, which mill-runs, when sorted, thirty ounces silver and two-tenths ounce gold per ton; developed by a tunnel 190 feet in length; output $1,000.

**Clear Creek County Reduction Works.**—Situated in Georgetown; containing all the necessary machinery for the successful manipulation of ores, and have a capacity for the treatment of fifty tons per day.

**Cleft Group.**—Owners Moses Hall and Nelson Syvestson, both Georgetown, Colo.; group comprises four claims, 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district, two miles from Lawson; located from 1874 to 1880; veins all fissures, with crevices from two to six feet in width, and pay streaks from one to ten inches of galena, which assays fifty ounces silver per ton; developed by adits 180 feet in length and the Mohawk tunnel 450 feet in length.

**Clifford Mining Company.**—(Unincorporated); composed of J. L. January, St. Louis, Mo., Harvey M. Thompson and O. J. Leath, both Chicago, Ill.; office Central City, Colo.; owns the Clifford lode, 1500x150 feet; situated at Camp Clifford, York Mining district, three miles from Central City; located in 1879, and in process of patent; vein a fissure, with a crevice

from two to twelve feet wide, and a pay streak from two inches to three feet of galena and black sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 500 ounces silver per ton; developed by a shaft 176 feet in depth and drifting aggregating 875 feet; worked by a fifteen-horse-power engine.

**Coin.**—Owners P. Morris and M. J. McKinley, both Idaho Springs, Colo.; claim 1500x150 feet; situated at Idaho Springs, Idaho Mining district; located in 1881; vein a fissure, with a crevice six feet wide, and a pay streak from six to eight inches of argentiferous galena in a quartz gangue, which mill-runs, when sorted, thirty-three ounces silver per ton; developed by a shaft thirty feet in depth.

**Cold Spring Tunnel Site.**—Owners Wm. F. Doherty and Thomas B. Harris, both Idaho Springs, Colo.; claim 3,000 feet in length; situated in Gillson Gulch, Idaho Mining district, three miles from Idaho Springs; located in 1879; on which a tunnel is run thirty feet long, designed for the development of the Corondolet, Hidden Treasure, North River, and Peoster lodes.

**Cold Stream Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1878; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; office Georgetown, Colo.; owns the following lodes, viz.: Cold Stream, Phœnix, Cape Horn, Grenadier, Cavalier, and Grenoch, 1500x150 feet each; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown, and all patented; veins all fissures, containing quartz and galena, which mill-runs, when sorted, 200 ounces silver per ton; developed by two shafts 200 and 300 feet in depth, respectively, and levels aggregating 1,000 feet; output $500,000.

**Colorado Central Mining Company (The).**—Incorporated under the laws of Colorado; owns the Colorado Central, a patented claim, 1500x50 feet; situated on Leavenworth Mountain, two miles from Georgetown, Griffith district; vein a vertical fissure about fifty feet wide; pay streak from six to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from 100 to 500 ounces silver per ton; and the ore reserves are stated to be large; developments consist of the Marshall and Ocean Wave tunnels, run on sites of these names, the former 1600 feet long, and a level, driven from the latter 600 feet in length, intersects the Colorado Central vein at a depth of 600 feet, besides considerable drifting and stoping; output for 1882 about $230,000.

**Colorado Southern.**—J. J. Montgomery and W. F. Kelso, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Kelso Mountain, Argentine Mining district, four miles from Bakerville; located in 1882; vein a fissure, with a crevice twenty inches wide, and a pay streak four inches of sulphurets, and iron and copper pyrites, carrying silver, which assays forty ounces silver per ton; developed by an open cut seventeen feet in length.

**Colorado Territory National Silver Mining Company (The).**—Incorporated under the laws of Maryland; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and treasurer, Nicholas Paphein, Baltmore, Md.; superintendent, John Fillins, Georgetown, Colo.; owns the Baltimore group, nineteen claims 1500x150 feet each; situated on Brown Mountain, Queen Mining district, two and one-half miles from Georgetown; veins all fissures, with crevices from four to twenty feet in width, containing quartz seamed with galena, which mill-runs, when sorted, twenty-five ounces silver per ton; developed by a tunnel 700 feet in length and drifts aggregating 5,000 feet; worked by a forty-horse-power engine.



**Colorado United Mining Company.**—(*Limited*); incorporated under the laws of Great Britain, in June, 1877; capital stock £325,000, in 65,000 shares of £5 each; Cecil Beden, chairman of the board of directors; Francis Andrews, secretary—both London, Eng.; Wm. A. Hamill, Georgetown, manager; offices London, Eng., and Georgetown, Colo.; owns the Terrible, a patented property, situated on Brown Mountain, at Brownville, about three miles from Georgetown; vein a fissure, running north seventy-seven degrees, and containing a pay streak from three to twelve inches wide, of galena, yellow copper, and zinc blende, in a gangue-matter of quartz, the property being well developed, and one of the largest producers in the county; during the past year the main shaft having been sunk eighty feet more, as well as 220 feet of winzes, and 675 feet of levels driven, the ore reserves being greatly increased thereby, and a large improved hoisting eighty-horse-power engine erected at the end of the Union tunnel, preparatory to sinking a shaft at that point; the Brown, Old Missouri, Silver Ore, Oneida, Last Chance, Coin, and Chelsea Beach situated on Brown Mountain, adjoining or adjacent to the Terrible, on which the work has of late been done by lessees, who have profited by the same and other claims on Sherman and Brown Mountains, near Brownville, all of which are patented and have considerable development; also owns a concentration-works situated at Brownville, with a capacity to treat thirty-five tons of ore per day.

**Colta and Hercules.**—Thomas B. Bryan and others, Idaho Springs, owners; Hercules 1500x150 feet, Colta 1400x50 feet in size; situated on Leavenworth Mountain, Leavenworth Mining district, two miles from Georgetown; located in 1876; the Colta patented in 1877, and the Hercules in 1881; veins both fissures, with crevices six and nine feet wide, respectively, and pay streak from two to six inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 500 to 800 ounces sievr per ton; developed by a shaft 160 feet in depth and levels aggregating 400 feet.

**Columbia Tunnel and Columbia Group.**—Twelve claims, 1500x150 feet each; M. Claypoal, J. E. Benson, and S. A. Wilson, all Georgetown, Colo., owners; tunnel is situated on Columbia Mountain, and is designed to cut and open up the veins in Columbia and Democrat Mountains, in Upper Union Mining district, near Georgetown; a tunnel is run for a distance of 500 feet on the tunnel site, and the twelve lode claims are located on veins opened by the same.

**Columbian Chief.**—S. Z. Hoyle, Golden, Colo., and others, owners; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district; located in 1879, and patented in 1882; vein a fissure, with a crevice from five to twenty-five feet in width, and a pay streak from five inches to five feet of galena and gray and yellow copper in a quartz gangue, which mill-runs, when sorted, from 60 to 700 ounces silver per ton; property is being worked by tunnels from the engine shaft of the Murray mine, which will cut the vein at a depth of 400 feet from the surface; output $15,000.

**Commonwealth.**—J. F. Cypher, Georgetown, Colo., Edwin Borden and Christopher Clawson, all Dumont, Colo., owners; claim 1400x50 feet; situated on Commonwealth Mountain, Montana Mining district, one and one-fourth miles from Dumont; located in 1869, and patented; vein a fissure, with a crevice from four to seven feet wide, and a pay streak from four to fifteen inches of galena in a quartz gangue, which mill-runs, when sorted, thirty per cent lead and thirty-three ounces silver per ton; developed by a shaft eighty feet in depth and levels aggregating ninety-five feet.

**Commonwealth Group.**—J. B. Johnson, Georgetown, Colo., owner: group comprises three claims, 1500x150 feet each; situated on

McClelland Mountain, Argentine Mining district, eight miles from Georgetown; veins all fissures, with crevices from ten to forty feet in width, and pay streaks averaging eight inches of galena in a quartz gangue, which mill-runs, when sorted, thirty-five ounces silver per ton; developed by a tunnel 180 feet in length and an open cut twenty feet in length.

**Comstock.**—Owners Jo. Reynolds, Chicago, Ill., and —— Weston; office 165 Washington street, Chicago, Ill.; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, near the town of Lawson; vein a fissure, with a crevice varying from two to ten feet in width, containing argentiferous galena, iron pyrites, and gray copper in a quartz gangue, which assays from 50 to 300 ounces silver per ton; developed by a shaft 100 feet in depth.

**Condor.**—Owned by David M. DeWitt, Georgetown, Colo.; claim 1500x150 feet; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; vein a fissure, with a crevice four feet wide, and a pay streak from four to sixteen inches of galena and sulphurets in a quartz gangue, which assays from 100 to 500 ounces silver per ton; developed by a shaft sixty feet in depth and a tunnel sixty feet in length.

**Confidence.**—Owners John H. McDonald, D. L. Golden, A. Horn, and Timothy and Michael Sheehan, all Georgetown, Colo.; claim 1500x150 feet; situated on Sherman Mountain, Griffith Mining district, four miles from Georgetown; located in 1880; vein a fissure, with a crevice ten feet wide, and a pay streak of two inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, forty-five ounces silver per ton; developed by a tunnel thirty feet in length.

**Confidence.**—Owned by David M. DeWitt, Georgetown, Colo.; claim 1500x150 feet; located in 1877; situated on Sherman Mountain, Griffith Mining district, near Brownville, and three miles from Georgetown; vein a fissure three and one-half feet wide; developed by an open cut twenty-five feet in length and fifteen feet in depth, and two tunnels fifty and sixty feet in length, respectively.

**Consolidated Seaton Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Thomas P. Bryan, Idaho Springs, Colo.; secretary, S. R. Thurston; treasurer, Samuel Ward—both Chicago, Ill.; offices 154 Lake street, Chicago, Ill., and Idaho Springs, Colo.; owns the following claims, viz.: Inter Ocean, Argo, Bride, Cornucopia, Cash, Lightning Streak, Dedrick, Cricket, Rattler, and Hub, all patented—the James, Martha, Tichnor, Tichnor Extension, Carpentine, Ella Beta, Wilkinson, Dragon, Montera, Kangaroo, France, and Colorado unpatented—and all 1500x150 feet; situated on Seaton Mountain and Sulphuret Hill, Idaho Mining district; all the lodes being worked through the Idaho and Colorado tunnels, 3,000 feet in length each, the Idaho cutting nine veins, all fissures, containing mainly argentiferous galena in a quartz gangue, which mill-runs, when sorted, from $30 to $600 per ton; worked by a complete plant of steam machinery and Ingersoll Air Drills.

**Continuity.**—Owned by Silas Hanchett, Empire, Colo.; claim 1500x150 feet; situated on Breckenridge Mountain, Upper Union Mining district, one and one-half miles from Empire; located in 1876; vein a fissure, with a pay streak eighteen inches wide of argentiferous galena in a quartz gangue which assays from twenty-five to thirty ounces silver per ton; developed by a shaft sixty feet in depth.



**Comet.**—(See Ohio Comet Silver Mining Company.)

**Copper Bottom and A. B. C.**—Ezra Paulson, Silver Plume, Colo., owner; claims 1500x150 feet each; situated in Queen Mining district, three miles from Silver Plume; located in 1879 and 1882, respectively; veins both fissures, with crevices four feet wide, and pay streaks from four to eight inches of galena and gray copper in a quartz gangue, which assays from 200 to 1,200 ounces silver per ton; developed by shaft forty-three feet in depth and drifts aggregating 170 feet.

**Corondolet.**—Wm. F. Doherty, Idaho Springs, Colo., owner; claim 1500x150 feet; situated in Gillson Gulch, Idaho Mining district, three miles from Idaho Springs; located 1865; vein a fissure, with a crevice nine feet wide, and a pay streak eighteen inches of argentiferous galena in a quartz gangue, which assays from 40 to 200 ounces silver per ton; developed by shaft 125 feet in depth.

**Crib and Snyder.**—John Coburn, Lawson, Colo., owner; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district; located 1875; vein a fissure, with a crevice five feet wide, and a pay streak from one-half to four inches of argentiferous galena and white iron in a quartz gangue, which assays $100 per ton in silver; developed by two shafts, one on each lode, fifty feet in depth each.

**Crown Point.**—B. C. Catron, Georgetown, Colo., owner; claim 1500 x150 feet; situated on Leavenworth Mountain, Griffith Mining district, two miles from Georgetown, and patented; vein a fissure, with a crevice twenty feet wide of quartz and galena, which assays twenty-five ounces silver per ton; developed by tunnel 100 feet in length and shaft thirty feet in depth.

**Custer.**—Daniel Riley, John Carter, John F. Riley, and Daniel J. Devar, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Quail Creek, West Argentine Mining district, eleven miles from Georgetown, Colo.; vein a fissure, with a crevice four feet wide, and a pay streak of four inches galena and yellow copper in a quartz gangue, which assays 140 ounces silver per ton; developed by one main shaft fifty feet in depth and a drift thirty feet in length.

**Cyclone.**—Thomas Egan and Thomas Burk, both Georgetown, Colo., owners; claim 1500x150 feet; situated on McClelland Mountain, Griffith Mining district, two and one-fourth miles from Georgetown; located 1880; vein a fissure, with a crevice six feet wide, and a pay streak six inches of galena in a quartz gangue, which mill-runs, when sorted, sixty ounces silver per ton; developed by an adit sixty feet in length.

**Czar and Valley Forge.**—Wm. B. Hood and Robert Old, both Georgetown, Colo., owners; claims 1500x150 feet each; situated on Democrat Mountain, Griffith Mining district, at Georgetown; located in 1880, and patented; veins both fissures, with crevices from two to four feet in width, and a pay streak from three to nine inches of galena and copper in a quartz gangue-matter, which assays 400 ounces silver per ton; developed by two tunnels 75 and 124 feet in length, respectively, and a shaft twenty-five feet in depth.

**Dan. W. Voorhees.**—W. W. Baldwin, J. R. Fisher, and Luke Palmer, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Columbia and Democrat Mountains, Griffith Mining district, two miles from Georgetown; located in 1878; vein a fissure, with a crevice six feet wide, and a pay streak varying from five to fifteen inches of galena and gray copper, in a

quartz gangue, which mill-runs, when sorted, fifty-nine ounces silver per ton; developed by an adit 340 feet in length and a shaft 260 feet in depth, with some drifting.

**Dead Jack and Chihuahua.**—N. W. Edwards and John Wing, both Georgetown, Colo., owners; claims 1500x150 feet each; situated on Columbian Mountain, Montana Mining district, one mile from Lawson; located in 1881 and 1882, respectively; veins both fissures, with crevices from three to five feet in width, and pay streaks from three to six inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 100 ounces silver per ton; developed by a tunnel 130 feet in length and a shaft 50 feet in depth.

**Decatur.**—Elbert Fitzgerald, Freeland, Colo., owner; claim 1500x150 feet; situated in Cottonwood Gulch, Jackson Mining district, three and one-half miles from Idaho Springs; located January, 1882; vein a fissure, with a crevice six feet wide, and a pay streak two feet wide of gray copper in a quartz gangue-matter; developed by a shaft twenty-five feet in depth.

**Delaware.**—(See Lehigh.)

**Delaware.**—(See Mascott.)

**Denver.**—H. O. Button and S. J. Button, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; located 1872, and patented; vein a fissure, with a pay streak twelve inches wide of galena in a quartz gangue, which mill-runs, when sorted, from 200 to 300 ounces silver per ton; developed by 200 feet of shafts and tunnels aggregating 1,300 feet in length.

**Denver View.**—Gow Bros. & Ireland, Idaho Springs, Colo., owners; claim 1500x150 feet; situated at Bullion Camp, Cascade Mining district, nine miles from Idaho Springs; vein a fissure, with a crevice five feet wide, and a pay streak from eight to ten inches of concentrating ore, being composed of gray copper, galena, and brittle silver in a quartz gangue-matter, which assays from 60 to 280 ounces silver per ton, and concentrates from $20 to $26 gross per ton; developed by a shaft 100 feet in depth.

**Detroit.**—D. R. Holbrook, Mattie Holbrook, and Thomas Brigham, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Kelso Monntain, West Argentine Mining district, twelve miles from Georgetown; located in 1872; vein a fissure, with a crevice six feet wide, through which is scattered galena and black sulphurets, assaying from 200 to 1,000 ounces silver per ton; developed by an adit 160 feet in length.

**Dexter.**—John Coburn, Lawson, Chas. P. Coburn and Robt. Coe, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, at Lawson; patented in 1878; vein a fissure, with a crevice sixteen feet in width, and a pay streak from two to three feet of galena in a quartz gangue, which mill-runs, when sorted, fifty-five per cent lead and fifty-six ounces silver per ton; developed by an adit on the vein 450 feet in length, and levels aggregating 200 feet,

**Diamond.**—(See Vancouver.)

**Diamond Group.**—C. I. Bellamy, T. B. Early, and Edward Reed, all Georgetown, Colo., owners; group comprises seven claims, 1500x150 feet each; situated on Columbian Mountain, Montana Mining district, at Lawson; located in 1881; veins all fissures, with crevices from four to six feet in width,



and pay streaks averaging two inches of galena and sulphurets in a quartz gangue, which assays from 135 to 500 ounces silver per ton; developed by seven shafts from ten to fifty feet in depth each.

**Diamond Joe.**—Owned by Joseph Reynolds, Chicago, Ill.; office 165 Washington street, Chicago, Ill.; claim 3000x150 feet; situated on the north slope of Kelso Mountain, Argentine Mining district, ten miles from Breckenridge, and near Georgetown; located in 1871, and patented; vein a fissure, with a crevice from four to eight feet in width, and a pay streak from two inches to three feet of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 200 to 300 ounces silver per ton; developed by a shaft 140 feet in depth, one main tunnel 800 feet in length, and other tunnels aggregating 860 feet; output $100,000.

**Diamond Tunnel Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, John H. Fowler; vice-president, Abner Greenleaf; secretary, H. H. Flack; treasurer, Oliver F. Lanty—all Baltimore, Md.; superintendent, John A. Fish, Georgetown, Colo.; offices Baltimore, Md., and Georgetown, Colo.; owns ten claims, 1500x150 feet each, and one mill site, all patented; situated on Republican and Sherman Mountains, Griffith Mining district, two miles from Georgetown; veins all fissures, with crevices from five to eighty feet wide, and pay streaks from three inches to two feet of iron pyrites and galena in a quartz gangue, which mill-runs, when sorted, from 50 to 100 ounces silver per ton; developed by a tunnel 2,100 feet long, run on the Diamond Tunnel site and designed for the development of the entire property (the Corry City lode, one of the Company's claims, containing a fissure vein thirty feet wide, with an ore of galena and gray copper in a quartz gangue-matter, not yet having been reached), 1,750 feet of drifts, and 645 feet of shafting; output about $50,000.

**Dictator and Monarch.**—Owned by W. H. Doe, Idaho Springs, Colo.; claims 1500x150 feet each; situated on Columbian Mountain, Montana Mining district; located in 1878, and patented in 1880; veins both fissures, with crevices two feet wide, and pay streaks twenty inches of gray copper and silver glance in a quartz gangue, which mill-runs, when sorted, from 200 to 300 ounces silver per ton; developed by a shaft 220 feet in depth, and drifts aggregating 375 feet in length.

**Dives Extension South.**—Owners R. O. Old and John Toomey, both Georgetown, Colo.; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district; located in 1872, and patented; vein a fissure, with a crevice ten feet wide, and a pay streak of one and one-half inches of galena in a quartz gangue, which mill runs, when sorted, 250 ounces silver per ton; developed by a shaft sixty-five feet in depth and levels aggregating 250 feet.

**Dora.**—Owners Susan Vincent and Dora Evans, both Denver, Colo., and Mary Williams, Arkansas City, Ark.; manager, J. P. Williams, Decatur, Colo.; claim 1500x150 feet; situated on the north-east slope of Argentine Mountain, Argentine Mining district, three miles from Decatur; located in 1881; vein a fissure, with a crevice eleven and one-half feet wide of quartz carrying galena, which assays thirty per cent lead and from 30 to 120 ounces silver per ton; developed by a shaft twelve feet in depth and a tunnel which will cut the vein at a depth of 300 feet from the surface.

**Duncan.**—Charles Fargo, Chicago, Ill., owner; claim 1500x150 feet; situated on Brown Mountain, Queen Mining district, two miles from Silver Plume, and patented; vein a fissure, with a crevice five feet wide, and pay streak

from one to eight inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 100 to 400 ounces silver per ton; developed by a shaft ninety feet in depth and levels aggregating 285 feet in length; output $10,000.

**Dunderberg.**—A. Libby and Julian Fountain, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, six miles from Georgetown; located in 1879; vein a fissure, with a crevice six feet wide, and a pay streak from two to four inches of argentiferous galena in a quartz gangue, which assays from 100 to 300 ounces silver per ton; developed by one main shaft 110 feet in depth and fifty feet of levels.

**Dunderberg Mining Company (The).**—Incorporated under the laws of New York, in May 1879; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Charles Quincey; secretary, H. S. Bradford; treasurer, Walter T. Hatch—all New York City; superintendent, B. C. Catren, Georgetown; offices 61 Broadway, New York City, and Georgetown, Colo.; owns the Dunderberg Group of eight claims; situated on the south slope of Sherman Mountain, Griffith Mining district, three miles from Georgetown, and patented; veins all fissures, from two to six feet in width, containing quartz and galena, which mill-runs, when sorted, $150 per ton; developed by six shafts from 60 to 600 feet in depth, and eight levels aggregating 5,260 feet; equipped with two engines forty-horse-power each; output 3,000 tons of ore, and produces $75,000 worth of ore per year; also owns a concentration-works situated on Sherman Mountain, three miles from Georgetown, the machinery consisting of jigs, and having a capacity for concentrating fifty tons of ore per day.

**Dunedin.**—James Burrell, Central City, Colo., and Robert O. Old, Georgetown, Colo., owners; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, one and one-half miles from Georgetown, Colo.; located in 1865, and patented in 1872; vein a fissure, with a crevice varying from one to three feet in width of iron and copper pyrites and galena in a quartz gangue, carrying silver and gold, which mill-runs, when sorted, $100 net per ton; developed by tunnel 100 feet in length and open cuts and drifts aggregating 300 to 400 feet.

**Dunkirk.**—(See Hermann Mining Company.)

**E Pluribus Unum.**—Owned by W. T. Reynolds, Georgetown, Colo.; claim 3000x50 feet; located 1868; situated on Sherman Mountain, Griffith Mining district, two miles from Georgetown; vein a vertical fissure three feet wide, pay vein twelve inches; nature of ore—galena in a quartz gangue, which mill-runs, when sorted, from $100 to $300 per ton; developments—one tunnel 165 feet in length and three adits aggregating 180 feet in length; total yield $12,000.

**East Cashier.**—Claim 700x50 feet; situated on Sherman Mountain at Brownville, and about three miles from Georgetown, Griffith Mining district; located in 1866 and patented; vein a fissure four feet wide, pay streak from one to twelve inches of galena and sulphurets in a quartz gangue, milling, when sorted, from 50 to 200 ounces silver per ton, although a higher grade of ore has been struck in the eastern workings, and is still paying well.

**East Fenton.**—Situated on Brown Mountain, at Brownville, and about three miles from Georgetown, Griffith district; vein a fissure, with a crevice thirty inches wide, containing a vein-matter of quartz and an ore of



galena, yellow copper, and zinc blende, milling, when sorted from the gangue-rock, from 50 to 250 ounces silver per ton; developments recently made make this a paying property.

**Eclat.**—J. A. Van Anken and Donald Ross, both Red Elephant, Colo., M. L. Jennings and A. H. Lowrey, both Michigan, owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district; located 1878; vein a fissure, with a crevice eight feet in width, and a pay streak from six to twelve inches of argentiferous galena in a quartz gangue, which mill-runs, when sorted, fifty per cent lead and twenty ounces silver per ton; developed by shaft 100 feet in depth.

**Edinboro'.**—H. Bradley and F. Hartman, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, one and one-half miles from Georgetown; located 1879, and patented; vein a fissure, with a ten-inch pay streak of galena and sulphurets in a quartz gangue, which assays from 50 to 500 ounces silver per ton; developed by an adit 220 feet in length and a shaft forty feet in depth.

**Emerson Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Chas. H. Emerson; secretary, Chas. A. Burgess; treasurer, John S. Hulin—all New York City; office 115 Broadway, New York City; owns the John L. Emerson, Asteroid, John L Extension, Lucia, Bessie, Emma Colwell, Ralph Waldo, and John Louville lodes, containing 13,000 feet; situated in Virginia Mining district, near Idaho Springs; veins all fissures, with crevices from two to thirteen feet in width, containing quartz, iron and copper pyrites, and galena, carrying both gold and silver, which mill-runs, when sorted, from one to three ounces gold and fifty ounces silver per ton; the Emerson is developed by 375 feet of levels and a shaft 225 feet in depth, while on each of the other claims there is considerable work.

**Emma.**—1500x150 feet; situated on Democrat Mountain, about three miles from Georgetown, Griffith district; located 1867, and patented; vein a fissure twenty-five feet wide, pay streak from four to twelve inches of galena in a quartz gangue, milling, when sorted, from 50 to 100 ounces silver per ton; developed by shaft 150 feet deep.

**Empire City and Empire City No. 2.**—Wm. M. Moore and H. H. Suttle, both Empire, Colo., and James W. Somers, Keokuk, Ia., owners; claims 1500x150 feet each; situated on Cavode Mountain, Upper Union Mining district, at Empire; located in 1877; vein a fissure, with a crevice three feet wide, and a pay streak one foot of iron and copper pyrites in a quartz gangue, containing gold, which mill-runs, when sorted, from three to five ounces gold per ton; developed by two shafts eighteen and fifty-five feet in depth, and a tunnel thirty-three feet in length; output sixteen tons per month.

**Equator Group.**—M. G., H. B., F. L., and J. Peck, all Georgetown, Colo., owners; group comprises the Equator, Gold Dirt, and Atlantic lodes, 1500x150 feet each; situated on Silver Mountain, Upper Union Mining district, one-half mile from Empire, and all patented; veins all fissures, with crevices from four to twelve feet wide, and pay streaks from three to twelve inches of iron and copper pyrites in quartz, which mill-runs, when sorted, one-half ounce gold per ton; developed by a shaft 230 feet in depth and some levels.

**Equator Mining and Smelting Company (The).**—Incorporated under the laws of Illinois, October 29, 1878; capital stock $300,000, in 3,000 shares of $100 each non-assesable; president, James B. Goodman; treasurer,

M. A. Farr—both Chicago, Ill.; superintendent, H. S. Kearney, Georgetown Colo.; offices Chicago, Ill., and Georgetown, Colo.; owns the Equator, 1400x50 feet, Munsell, Halcyon, and Hunter, 1500x150 feet each; situated on Leavenworth Mountain, Griffith Mining district, two miles from Georgetown, Colo., and patented; veins all fissures, with pay streaks of gray copper and galena in a quartz gangue, which mill-runs, when sorted, from 200 to 400 ounces silver per ton; developed by a shaft 500 feet in depth, drifts aggregating 6,000 feet, and a cross-cut tunnel 1,100 feet in length; output $1,200,000.

**Equitable Silver Mining Company (The).**—Incorporated under the laws of New York, May 10, 1879; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, Walter Edwards Jr.; secretary and treasurer, T. S. Vanvalkenburgh—both New York; superintendent, W. M. Fletcher, Georgetown, Colo.; offices 1120 Main street, Georgetown, Colo., and 120 Broadway, New York City; owns the Shively, Walton, and Sophia lodes, 1500x150 feet each; situated on Brown Mountain, Queen Mining district, four miles from Georgetown; located in 1874 and 1879, and patented; veins all fissures, with crevices from one to five feet in width, and pay streaks six inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by one main shaft 720 feet in depth, another shaft 100 feet in depth, a tunnel 600 feet in length, and drifts aggregating 3,000 feet; worked by a seventy-five-horse-power engine; output $100,000.

Owns the Providence, Edgar, and Chance lodes, 1500x150 feet each; situated on Democrat Mountain, Upper Union Mining district, two miles from Georgetown; located from 1872 to 1877; veins all fissures, with crevices from four to eight feet wide, and pay streaks from one to twelve inches of galena in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by a tunnel 200 feet in length and drifts aggregating 1,600 feet; output $50,000.

Also owns the Effie lode, 1500x150 feet; situated on Sherman Mountain, Queen Mining district, two and one-half miles from Georgetown; located in 1877, and patented; vein a fissure, with a crevice six feet wide of quartz carrying galena, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by a drift fifty feet in length and a tunnel sixty feet in length.

Also owns the Evening Sun, Republican Valley, and Iowa lodes, 1500x150 feet each; situated on Red Elephant Mountain, Downieville Mining district, six miles from Georgetown; located in 1877, and patented; veins all fissures, with crevices from three to fifteen feet in width, and pay streaks from two to twelve inches of galena and iron pyrites in a quartz gangue, which mill-runs, when sorted, from 15 to 150 ounces silver per ton; developed by a tunnel 100 feet in length, and shafts and drifts aggregating 500 feet.

**Esperanza.**—Situated on Brown Mountain, at Brownville, and about three miles from Georgetown, Griffith Mining district; vein a fissure, with a crevice thirty inches wide, containing a vein-matter of quartz and an ore of galena, yellow copper, and zinc blende, milling, when sorted from the gangue-rock, from 50 to 250 ounces silver per ton; developments recently made make this a paying property.

**Essex.**—John G. Kennedy and John G. Curtin, both Silver Plume, and Hugh R. Steele, Montezuma, owners; claim 1500x150 feet; situated on the south slope of Republican Mountain, one-fourth mile from Silver Plume, Griffith Mining district; located in May, 1881, and in process of patent; vein a fissure three feet wide, pay streak five inches of galena in a quartz gangue, which mills, when sorted, 40 per cent lead and 200 ounces silver per ton; developed by one shaft 20 feet in depth and one tunnel 400 feet in length.



**Fairfax Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, W. A. Hutchinson; secretary, H. H. Atkins—both Georgetown, Colo.; owns the Fairfax lode, 1500x150 feet, Fairfax Tunnel site, 3,000 feet in length, and five other lodes, 1500x150 feet each; situated on McClelland Mountain, East Argentine Mining district, eight miles from Georgetown, and partially patented; veins all fissures, with pay streaks from one to ten inches of galena in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by two tunnels 380 and 425 feet in length, respectively, with some drifting.

**Fairmount and Shafter Mining Company (The).**—Incorporated under the laws of New York; president, Chas. H. Waterbury; secretary and treasurer, James L. Dawes—both New York; agent, J. H. Shepherd, Idaho Springs, Colo.; offices 21 Nassau street, Room 30, New York City, and Idaho Springs, Colo.; owns the Fairmount and Shafter lodes, 1500x150 feet each; situated in Hukill Gulch, Spanish Bar Mining district; veins both fissures, with crevices from two to four feet wide containing argentiferous galena and copper in a quartz gangue; Fairmount is developed by a shaft 250 feet in depth and levels aggregating 125 feet; Shafter by two adits on the vein aggregating 500 feet; output $75,000.

**Falcon.**—Owners Charles M. Loring, Silver Plume, and J. E. DuBois, Dumont, Colo.; claim 1500x150 feet; situated on French Mountain, Trail Creek Mining district, one-half mile from Freeland, and five miles from Idaho Springs, and patented; vein a fissure, with a crevice six feet in width, and a pay streak of fourteen inches of galena and copper in a quartz gangue, which assays from $30 to $60 per ton; developed by an adit 175 feet in length.

**Fenian Star.**—Owners P. Morris and M. J. McKinley, both Idaho Springs, Colo.; claim 700x50 feet; situated in Hukill Gulch, Spanish Bar Mining district, one mile from Idaho Springs; located in 1860; vein a fissure, with a crevice eight feet wide, and a pay streak of fifteen inches of argentiferous galena, iron and copper pyrites in quartz carrying gold and silver, which assays $300 per ton; developed by a tunnel ninety feet in length and a shaft twenty feet in depth.

**Financier.**—Owners Alexander Redd and J. H. Bell, both Idaho Springs, and McClure & Bostwick, St. Elmo, Colo.; claim 1500x150 feet; situated at Bullion Camp, Cascade Mining district; located in 1882; vein a fissure, with a crevice five feet wide, and a pay streak of sixteen inches of galena, chlorides, silver glance, and native silver in a quartz gangue, which mill-runs, when sorted, from 100 to 250 ounces silver per ton; developed by a shaft thirty feet in depth; output $1,100.

**Fisher Group.**—Owners James A. Fisher and P. B. Fisher, both Georgetown, Colo.; group comprises six claims, 1500x150 feet each; situated on Democrat Mountain, Griffith Mining district, two miles from Georgetown; located in 1878, and partially patented; veins all fissures, with crevices from five to twenty feet in width, and pay streaks from five to eighteen inches of galena, sulphurets, and gray copper in a quartz gangue, which assays from 100 to 250 ounces silver per ton; developed by adits aggregating 425 feet in length and shafts seventy feet in depth.

**Flag-staff Group.**—Owners Wm. F. Kelso and George T. Morrison, both Denver, and others; group comprises the Flag-staff, Tunnel, Tunnel Extension, Fish, Professor, and Tadder lodes, 1500x150 feet each; situated on Kelso Mountain, Argentine Mining district; located from 1865 to 1878; veins all fissures about 100 feet wide, and pay streaks averaging nineteen inches of

argentiferous galena, gray copper, and sulphurets of silver in a quartz gangue, which mill-runs, when sorted, from 200 to 400 ounces silver per ton; developed by tunnels and drifts aggregating 500 feet; output $40,000.

**Fletcher Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1878; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, James R. Smith; superintendent, E. Le N. Foster, Georgetown, Colo.; offices Georgetown, Colo., and New York City; owns the Matilda Fletcher lode, 1400x50 feet; situated on Democrat Mountain, Upper Union Mining district, two and one-half miles from Georgetown, and is patented; vein a fissure, with a crevice ten feet wide, and a pay streak from one to fifteen inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 350 ounces silver per ton; developed by tunnels aggregating 2,200 feet and shafts 500 feet, with drifting and stoping; output $75,000.

**Florence.**—John G. Roberts, Georgetown, Colo., owner; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, two miles from Georgetown; located in 1876, and patented; vein a fissure, with a crevice from six to ten feet in width of quartz, galena, and sulphurets, milling, when sorted, from 50 to 350 ounces silver per ton; developed by a tunnel 400 feet in length and a shaft twenty-eight feet in depth.

**Fox.**—Christian Halbroson and George R. Squires, both Dumont, Colo., owners; claim 1500x150 feet; situated on Albro Hill, Morris Mining district, three-fourths mile from Dumont; located in 1880; vein a fissure, with a crevice from six to eight feet in width, and a pay streak six inches of iron and copper pyrites in a quartz gangue, which assays $85 per ton; developed by two adits forty feet long each.

**Foxhall Tunnel and Mining Company.**—Incorporated under the laws of Colorado, in 1881; capital stock $500,000 in 50,000 shares of $10 each, non-assessable; president, S. R. Womack, El Paso, Colo.; vice-president, F. W. Beebee, Manitou, Colo.; secretary, treasurer, and general manager, Theodore H. Lowe, Idaho Springs, Colo.; office Idaho Springs, Colo.; owns the following claims: Foxhall Tunnel, 3,000 feet in length, and Fourth of July, Mystic, Illinois, Lorillard, Princess, Duchess, Beaty, and Silver Spruce lodes, all 1500x150 feet each; situated on Seaton Mountain, Idaho Mining district; Fourth of July patented in 1883; veins all fissures, with crevices varying from four to six feet in width; ore—argentiferous galena in a quartz gangue, which mill-runs, on the Lorillard, when sorted, $125 per ton; a tunnel is run on the tunnel site 600 feet long, which has opened up the Lorillard and Silver Spruce lodes; worked by a thirty-horse-power engine and two Rand Drills; output from 1871 to 1877, 3,260 tons of ore, netting $112,110.

**Frank Blair.**—J. T. Harris, Georgetown, and John Dumont, Idaho Springs, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district, one-fourth mile from Georgetown; patented in 1878; vein a fissure, with a crevice four feet wide, and a pay streak from one-half inch to ten inches of galena and zinc blend in a quartz gangue, which assays thirty ounces silver per ton; developed by an adit 250 feet in length.

**Fred Rogers.**—(See Lincoln Mining Company.)

**Freeland Mining Company.**—Incorporated under the laws of Colorado; capital stock $5,000,000, in 200,000 shares of $25 each, non-assessable; president, R. C. McCormick; secretary and treasurer, D. F. Verdinal—both New York; general manager, F. F. Osbiston, Idaho Springs, Colo.; offices 39 Broadway, N. Y., and Idaho Springs, Colo.; owns the Freeland lode and its



extension, 2000x150 feet; situated at Freeland, Trail Run Mining district; vein a fissure, with a crevice varying from three to six feet in width, and containing argentiferous galena and sulphurets of silver in a quartz gangue, which mill-runs, when sorted, $45 per ton; developed by several hundred feet of shafts and drifts; output from June 1, 1882, when the Company commenced shipping ore, to January 15, 1883, 4,270 tons of ore, valued at $192,579; and owns a concentrating-works, built by Fraser & Chalmers, Chicago; situated at Freeland; main building (frame) containing twelve jigs, one buttle, three sets Cornish Rolls, and two Blake Crushers, motive power for the same being supplied by an eighty-five-horse-power engine; capacity 120 tons in twenty-four hours.

**Frostburgh Group.**—R. O. Old and W. W. Wrigley, both Georgetown, Colo., owners; group comprises four claims, 1500x150 feet each; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown, and patented; veins all fissures, with crevices from two to five feet in width, and pay streaks from six to eighteen inches of argentiferous galena, iron pyrites, and zinc blende in a quartz gangue, which mill-runs, when sorted, from 20 to 100 ounces of silver per ton; developed by eleven shafts aggregating 438 feet in depth, and levels aggregating 200 feet; yield $30,000.

**Gem.**—Charles Stimson, Denver, Colo., and A. P. Florida, Kansas City, Mo., owners; J. J. Elliott, Idaho Springs, Colo., agent; claim 1500x150 feet; situated on Seaton Mountain, Idaho Mining district, two miles from Idaho Springs; patented 1876; vein a fissure, with a crevice from four to seven feet wide, and pay streak from five inches to three feet of carbonates, oxide of copper, and gray copper in a quartz gangue, which mill-runs, when sorted, $65 net per ton; developed by shaft 238 feet in depth, levels aggregating 200 feet, and an adit on the vein 265 feet long; output $30,000.

**Gem and Grand View.**—Silas Hanchett, Empire, Colo., and Samuel P. Allen, Georgetown, Colo., owners; claims 1500x150 feet each; situated on Democrat Mountain, Upper Union Mining district, three and one-half miles from Empire; located 1875, and patented 1878; vein a fissure, with a crevice five feet wide; ore—argentiferous galena and sulphurets in a quartz gangue, which assays from 150 to 280 ounces of silver per ton; developed by tunnel 200 feet in length.

**Gen. Weaver.**—1500x150 feet; situated on the west slope of Alps Mountain, one mile from Cascade, Cascade district; located in March, 1881; owners R. J. Jones, Georgetown, Henry George, Erie, Colo., John Rowe, Freeland, Colo., and Abram Cook, —— Pa.; vein a fissure four feet wide, pay streak five inches of galena in a quartz gangue, which assays twenty-five ounces silver per ton; developed by one eighteen-foot drift.

**Glendower.**—Owners W. M. Fletcher, D. Shively, and M. I. Claypool, all Georgetown, Colo.; claim 1500x150 feet; situated on Columbia Mountain, Griffith Mining district, one and one-fourth miles from Georgetown; located 1879; vein a fissure, with a crevice five feet wide, and a pay streak from one to twenty inches of galena and sulphurets in a quartz gangue, which mills, when sorted, from 106 to 1,000 ounces silver per ton; developed by tunnels aggregating 580 feet and shafts 255 feet, with some drifting.

**Gold Milling and Mining Company (The).**—Incorporated under the laws of Colorado; president, L. S. Kennedy; secretary, W. H. Wiswall—both Denver, Colo.; office Tabor Block, Denver, Colo.; owns a mill situated at Empire, now leased to John F. Carter, and is used for treating and desulphurizing ores by the Carter-Bancroft process.

**Gold and Silver Coin Group.**—G. J. Hite and J. F. Philips both Georgetown, Colo., owners; group comprises twelve claims, 1500x150 feet each; situated on Leavenworth Mountain and Burrell Hill, Griffith Mining district, at Georgetown; located from 1880 to 1882, and partially patented; veins all fissures, with crevices from four to thirty feet wide, and pay streaks from six to twenty inches of galena and copper in a quartz gangue, which mill-runs, when sorted, four per cent copper, one-half ounce gold, and thirty-two ounces silver per ton; developed by shafts aggregating 350 feet and levels 600 feet; the Gold and Silver Coin Tunnel which is now being run will develop the entire property.

**Gold and Silver King.**—Nathan S. Crane, Dumont, Colo., and David Downie, Denver, Colo., owners; claim 1500x150 feet; situated on Pitcher Mountain, Downieville Mining district; located in 1861; vein a fissure, with a crevice four feet wide, and a pay streak twenty inches of galena and iron pyrites in a quartz gangue, carrying gold and silver; developed by an adit 100 feet in length.

**Golden Contact.**—Harry Lewes & Co., Dumont, Colo., owners; claim 1500x150 feet; situated on Pitcher Mountain, Downieville Mining district, one mile from Dumont; located in 1882; vein a fissure, with a crevice twenty feet wide, and a pay streak four inches in width of quartz carrying free gold and silver, which assays one and one-tenth ounces gold and 140 ounces silver per ton; developed by a shaft twelve feet in depth.

**Golden Link.**—(Eastern Extension Donaldson); W. H. Doe, Idaho Springs, owner; claim 1074x150 feet; situated opposite Kelly Mountain, Trail Run Mining district, two miles from Idaho Springs; located in 1881, and patented in 1882; vein a fissure, with a crevice five feet wide, and a pay streak twenty inches of galena, iron and copper pyrites in a quartz gangue, carrying gold and silver, which assays 105 ounces silver per ton; developed by an adit on the vein 200 feet in length.

**Golden Pitcher.**—Nathan S. Crane, Dumont, Colo., owner; claim 1500x150 feet; situated on Pitcher Mountain, Downieville Mining district, one-half mile from Dumont; located in 1861; vein a fissure, with a crevice four feet wide, and a pay streak two inches of galena and iron pyrites in a quartz gangue, which assays one-fourth ounce gold and twelve ounces silver per ton; developed by an adit on the vein twenty feet in length.

**Golden Rule.**—W. H. Beamer, A. Beamer, C. Chapman, and Richard Paul, all Lawson, Colo., owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, near Lawson; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak three inches of galena in a quartz gangue, which assays from 200 to 300 ounces silver per ton; developed by a shaft thirty feet in depth.

**Good Luck Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1880; president, J. F. Mathews, Denver, Colo.; vice-president, G. Netter, Cincinnati, Ohio; secretary and treasurer, S. A. Herrick, Denver, Colo.; superintendent, P. McNulty, Georgetown, Colo.; offices Denver and Georgetown, Colo.; owns the Little Emma Group of patented claims, 1500x150 feet each; situated on Democrat Mountain, Upper Union Mining district, three miles from Georgetown; veins all fissures, with crevices seven feet wide on an average, and pay streaks from four to six inches of galena in a quartz gangue, which mill-runs, when sorted, from 100 to 300 ounces silver per ton; developed by a tunnel 540 feet in length, a shaft 570 feet in depth, with considerable drifting and stoping; improvements—one thirty-horse-power engine and a Worthington Steam Pump; output $125,000.



**Grand View.**—Owned by G. J. Hite, Georgetown, Colo.; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, at Georgetown; located in 1880; vein a fissure, with a crevice twelve feet wide, and a pay streak of four inches of galena and sulphurets in a quartz gangue, which assays from 40 to 400 ounces silver per ton; developed by 200 feet of levels.

**Gray.**—Owners E. B. Gray and J. E. Johnson, both Georgetown, Colo.; claim 1500x150 feet; situated on Gray Mountain, Griffith Mining district, two and one-half miles from Georgetown; located in 1880; vein a fissure, with a crevice thirty inches wide, and a pay streak of seven inches of galena in a quartz gangue, which assays seventy ounces silver per ton; developed by a tunnel eighty feet in length.

**Gray Copper and Horn Silver Group.**—Consisting of Gray Copper, Horn Silver, and one other claim, 1500x150 feet each; situated on Leavenworth Mountain, Griffith Mining district, near Georgetown; located in 1879; G. J. Hite & Co., Georgetown, Colo., owners; veins all fissures, with crevices from four to eight feet in width, and pay streaks from two to six inches of galena and sulphurets in a quartz gangue, which assays from 80 to 200 ounces silver per ton; developed by 190 feet of drifting.

**Gray Eagle Group.**—Consisting of Gray Eagle, Fulton, and Oswego; William F. Kelso, Denver, and others, owners; claims 1500x150 feet; situated on McClelland Mountain, Argentine Mining district; located in 1865; vein a fissure, with a crevice from four to six feet wide, containing argentiferous galena in a quartz gangue, which mill-runs, when sorted, from 50 to 300 ounces silver per ton.

**Great Eastern.**—Owners Daniel Doyle, John S. Languish, Geo. H. Pierce, and Chas. Samson, all Georgetown, Colo.; claim 1500x150 feet; situated in Cascade Mining district, six miles from Idaho Springs; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from ten to thirty inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, 150 ounces silver per ton; developed by a tunnel 110 feet in length and two shafts forty-five feet in depth each; output $2,000.

**Great Republic.**—Claim 1500x150 feet; situated on Silver Mountain, Upper Union Mining district; located in 1876; vein a fissure from four to six feet wide, with a pay streak of iron and copper pyrites, carrying gold and some free-gold-bearing quartz, which mill-runs, when sorted, $50 per ton; developed by a tunnel 100 feet long and some other workings.

**Great Republic Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, A. D. Breed; vice-president, John D. Oxner; secretary and treasurer, James McQuade; general manager, Thomas H. Bates; offices Room 77 No. 30 Broad street, New York City, and Empire, Colo.; owns the Silver Mountain and Silver Mountain Nos. 2 and 3 lodes, 800x150 feet each, and the S. R. Platt, Great Eastern, Grand Republic, Colorado State, Grand View, Keystone, and Picket lodes, 1500x150 feet each; situated on the east and west forks of Lyon Creek, at North Empire, Upper Union Mining district, one mile north of Empire; veins all fissures from two to eight feet in width, carrying galena, zinc blende, copper and iron pyrites, in a gangue-matter of quartz, which mills, when sorted, from one to three ounces gold and from five to fifteen ounces silver per ton; the Great Republic being developed by a number of adits on the vein varying in length from 100 to 300 feet, the Silver Mountain by five shafts from 75 to 250 feet in depth, with connecting levels and considerable stoping, while on the others the Company is doing development work; output about $100,000.

**Great Republican.**—Owners Wm. F. Doherty, Thos. B. Bryan, and others, Idaho Springs, Colo.; claim 1500x150 feet; situated in Chicago Gulch, Jackson Mining district, three miles from Idaho Springs; located in 1880, and in process of patenting; vein a fissure, with a cervice twelve feet wide, and a pay streak from four inches to two feet of native silver and gray copper in a quartz gangue, which mill-runs, when sorted, from $65 to $130 per ton; developed by a shaft 180 feet in depth and drifts aggregating 200 feet; output twenty-five tons per month.

**Great West and Bonn.**—J. H. Bonn and John Jennings, both Georgetown, Colo., owners; claims 1500x150 feet each; situated on Kelso Mountain, West Argentine Mining district, ten miles from Georgetown; located in 1878, and patented; veins both fissures, with crevices from four to six feet in width, and pay streaks from four to ten inches of galena and black sulphurets in a quartz gangue, which assays from 160 to 1,700 ounces silver per ton; developed by a tunnel fifty feet in length.

**Great Western.**—(See Little Chief.)

**Great Western and Hyena.**—Two claims, 1500x150 feet; situated on the north-west slope of Irwin Mountain, four miles from Chihuahua, West Argentine district; located in September, 1882; owners James Englen, Jno. L. Sanders, and Edwd. Dreyer, all Chihuahua; vein a fissure twenty-five feet wide, pay streak from two to six inches of yellow copper and galena in a quartz gangue, which assays from 50 to 150 ounces silver per ton; develpoed by two adits twelve feet long each, one on each claim.

**Gum Tree.**—Israel Sattts, Greeley, Colo., owner; Clarence K. Colvin, Idaho Springs, superintendent; claim 1500x150 feet; situated on Trail Creek, Trail Run Mining district, four miles from Idaho Springs; located November 16, 1877, and patented in 1880; vein a fissure, with a crevice from eight to twelve feet in width, and a pay streak from six to twenty-four inches, and concentrates from three to four feet; ore—iron and copper pyrites and galena, carrying gold, silver, and lead, with a gangue-matter of quartz, which mill-runs, when sorted, from $60 to $70 net per ton, above the cost of mining, and $26 net per ton, the concentrating ore milling about $5 net per ton; developed by an adit on the vein 1,050 feet in length; output 675 tons of ore.

**H. I. B.**—Silas Hanchett, Empire, Colo., and F. M. Irish, Denver, Colo., owners; claim 1500x150 feet; situated on Douglass Mountain, Griffith Mining district, one and one-half miles from Empire; located in 1880; vein a fissure, with a crevice three feet in width, containing argentiferous galena in a quartz gangue-matter, which assays from ten to eighty ounces silver per ton; developed by a shaft seventy feet in depth.

**Hard Cash.**—John A. Fish and H. N. Moore, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district, one mile from Georgetown; located in 1880; vein a fissure, with a crevice from six to ten feet in width, and a pay streak from three to six inches of silver glance and gray copper in a quartz gangue, which assays from 100 to 500 ounces silver per ton; developed by two adits thirty and thirty-five feet in length, respectively, and a shaft thirty feet in depth.

**Hardscrabble Group.**—Owned by William M. Pinckard, Georgetown, Colo.; group comprises five lodes, 1500x150 feet each, viz.: Hardscrabble, Lucinda, Miner Girl, Dixie, and Avalanche; situated on Hanna Mountain, a west spur of Brown Mountain, in Queen Mining district; veins all fissures, with crevices from two to four feet in width, carrying galena and sulphuret ore



in a quartz gangue, which assays from 100 to 500 ounces silver per ton; Hardscrabble developed by drift 362 feet long on the vein, and the others by shafts from ten to seventy feet in depth.

**Hebron.**—Mary M. Smith and Alice Roberts, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district, at Georgetown; located in 1881; vein a fissure, with a crevice eight feet wide, and a pay streak from one to two inches of gold and silver bearing quartz, which assays $28 in gold and $1,500 in silver per ton; developed by an open cut, with a thirty-foot face.

**Henry Ward Beecher.**—Owners N. Sargent and C. L. Moe, both Denver, Colo.; claim 100x150 feet; situated on the south slope of Democrat Mountain, Griffith Mining district, one mile from Georgetown, and patented May 15, 1882; vein probably a fissure, with porphyry and granite walls twenty feet wide, containing three pay streaks aggregating thirty inches in width of galena in a quartz gangue, which mill-runs, when sorted, sixty per cent lead and from twenty to forty ounces silver per ton; developed by five shafts from ten to seventy feet in depth, one ten-foot-face open cut, and one drift 150 feet long and sixty feet from the surface.

**Hercules.**—Owners C. W. Stanton, Georgetown, and I. S. Baker, Denver, Colo.; claim 1500x150 feet; situated at Fall River, in Virginia Mining district, and patented; vein a fissure, with a crevice from two to five feet in width, and a pay streak from one to twelve inches, containing galena and sulphurets in a quartz gangue, which averages thirty per cent lead and thirty-five ounces silver per ton; developed by a shaft fifty feet in depth.

**Hercules Tunnel.**—(See Seven-Thirty Group.)

**Hermann Mining Company (The).**—Incorporated under the laws of New York; capital stock $200,000; offices Georgetown, Colo., and New York City; owns the Dunkirk lode, 1400x150 feet, and the Peralto, 1500x 150 feet; both situated on Republican Mountain, Griffith Mining district, about three miles from Georgetown; located in 1874, and patented; veins both fissures, running nearly east and west, well defined, and in the former over fifty feet wide, with a pay streak from one to twenty-four inches of iron and copper pyrites, galena, gray copper, and zinc blende, intermixed with a considerable percentage of wire silver and silver glance; developed by one main shaft about 400 feet deep, with 2,000 feet of drifts and cross-cuts, and some stoping, the property of late being worked for development, although it has been producing regularly; improvements—steam hoisting and pumping machinery, with the accompanying buildings; and in the Peralto ten feet wide, pay streak from six to twelve inches; developed by shafts and tunnels.

**Herschel.**—Owners Wm. F. Doherty and Thomas B. Harris, both Idaho Springs, Colo.; claim 1500x150 feet; situated on Soda Creek, Grass Valley Mining district, three miles from Idaho Springs; located in 1870; vein a fissure, with a crevice eight feet wide, and a pay streak twenty inches of native silver in a quartz gangue, which assays $38 per ton; developed by a shaft twenty-five feet in depth.

**Hidden Treasure.**—Owners William Doherty and J. C. Wright, both Idaho Springs, Colo.; claim 1500x150 feet; situated in Gillson Gulch, Idaho Mining district, three miles from Idaho Springs; located in 1879; vein a fissure, with a crevice five feet wide streaked all through with argentiferous galena in a quartz gangue, which assays fifty ounces silver per ton; developed by two shafts sixty feet in depth each.

**Highland Chief.**—Owners T. M. Chinn, Dumont, Charles C. Welch, Golden, and C. Stevens, Idaho Springs, Colo.; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district, and patented in 1879; vein a fissure, with a crevice from four to six feet in width, and a pay streak from twenty-four to thirty inches of galena and gray copper in a quartz gangue, which assays from 70 to 300 ounces silver per ton; developed by a shaft ninety feet in depth and drifts aggregating 125 feet in length.

**Highland Chief.**—Thomas B. Bryan and others, Idaho Springs, Colo., owners; claim 1500x150 feet; situated on McClelland Mountain, East Argentine Mining district, near Georgetown, and patented 1880; vein a fissure, with a crevice ten feet wide, and a pay streak from four inches to three feet of galena and sulphurets in a quartz gangue, which assays 150 ounces silver per ton; developed by an adit sixty-five feet in length.

**Highland Laddie.**—John Coburn, Lawson, Colo., and Chas. P. Baldwin, Georgetown, Colo., owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district; located 1878, and patented 1880; vein a fissure, with a crevice four feet wide, containing an ore of argentiferous galena and a quartz gangue-matter, which mill-runs, when sorted, 135 ounces of silver per ton; developed by two shafts twenty-three and twenty-five feet in depth, respectively, and a drift forty feet in length.

**Highland Lassie.**—John Coburn, Lawson, Colo., owner; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville district; located 1879; vein a fissure, with a crevice five feet in width, and a pay streak from three to twelve inches of argentiferous galena in a quartz gangue, which assays 100 ounces silver per ton; developed by shaft forty-five feet in depth.

**Highland Mary Group.**—J. Simmons and C. Luther, both Georgetown, Colo., owners; group comprises the Highland Mary, Highland Mary Extension, and Thunderbolt, 1500x150 feet each; situated on Lincoln Mountain, Upper Union Mining district, two miles from Empire; located 1880; veins all fissures, with crevices from one to four feet in width, containing quartz seamed with galena and sulphurets, which assays from 150 to 200 ounces silver per ton; developed by a tunnel forty feet in length and a shaft twenty feet in depth.

**Hillside Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $600,000, in 600,000 shares of $1 each, non-assessable; president, David F. B. Carson; secretary, Arthur V. Wiltsir—both New York City; treasurer, Thomas G. Carson, Boston, Mass.; superintendent, John Fillins, Georgetown, Colo.; offices No. 5 Dey street, New York City, and Georgetown, Colo.; owns the Herkimer lode, 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district, three-fourths mile from Georgetown, and patented; vein a fissure, with a crevice four and one-half feet wide, and a pay streak from three to eight inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, 200 ounces silver per ton; developed by an adit 600 feet in length; and the Major Anderson lode, 50x2200 feet; situated on Griffith Mountain, Griffith Mining district; vein a fissure, with a crevice four feet wide, containing galena in a quartz gangue, which assays from 50 to 900 ounces silver per ton; developed by shaft eighty feet in depth.

**Hise, Elijah.**—(See Lebanon Mining Company.)

**Home Base and Ashford.**—F. P. Rosengarten, C. Bull, and James DuBois, all Jamestown, Colo., owners; claims 1500x150 feet each; situated at Argentine Pass, Argentine Mining district, ten miles from Georgetown; located in 1881; vein a fissure, with a crevice seven feet wide, and a pay streak varying from three to six inches of galena and gray copper in a quartz gangue, which assays $600 per ton; developed by two adits thirty feet in length each.



**Hood.**—Wm. B. Hood, Georgetown, owner; claim 1500x150 feet; situated on Griffith Mountain, Griffith Mining district, and patented; vein a fissure, with a crevice twenty feet wide, and a pay streak from six to twelve inches of galena in a quartz gangue, which assays two ounces gold and fifty ounces silver per ton; developed by a tunnel forty feet in length, and a level 300 feet long, running from the adit.

**Hoosac Mining and Milling Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $400,000, in 40,000 shares of $10 each, non-assessable; president, Geo. S. Merrill, Lawrence, Massachusetts; vice-president, Thomas B. Bryan, Idaho Springs, Colo.; secretary, Henry B. Pierce; treasurer, C. S Haldeman—both Boston, Massachusetts; general manager, J. V. W. Vandenburgh, Idaho Springs, Colo.; offices 33 Milk street, Boston, Massachusetts, and Idaho Springs, Colo.; owns the following claims: Hoosac, Hoosac Extension, and Maria Collins, covering 4500x150 feet on the same vein, situated in Clear Creek Cañon, Spanish Bar Mining district; and the Little Mattie, 1500x150 feet, situated in Cottonwood Gulch, Jackson Mining district; located in 1877, and patented November, 1882; veins all fissures, with a crevice in the Hoosac group varying from four to twelve feet; Little Mattie vein twelve feet wide, and pay streak from six to thirty inches—all containing gray copper and argentiferous galena in a gangue-matter of quartz, which mill-runs, in Little Mattie, $165 75 net per ton, after sorting; Little Mattie developed by a shaft 325 feet in depth and four levels from 100 to 230 feet in length; worked by a fifty-horse-power engine and a complete plant of air drills—work performed by compressed air; output for 1882, $18,000; Hoosac group developed by a shaft 132 feet in depth and levels aggregating 100 feet in length.

**Hoosier.**—John Coburn, Lawson, Colo., owner; claim 1500x150 feet; situated at the base of Red Elephant Mountain, Downieville Mining district; located in 1878, and patented in 1882; vein a fissure, with a crevice four feet in width, and a pay streak four inches of argentiferous galena in a quartz gangue, which assays 265 ounces silver per ton; developed by two shafts twenty and forty feet in depth, respectively, and a cross-cut thirty feet in length.

**Hope.**—R. L. Hornbrook and H. J. Criley, both Silver Plume, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Argentine Mining district, one mile from Silver Plume; located in 1882; vein a fissure, with a crevice thirteen feet wide of quartz and galena, which assays fifteen ounces silver per ton; developed by a shaft eighteen feet in depth.

**Hornblende.**—Richard P. Chinn, Kansas, owner; claim 1500x150 feet; situated on Wall Street Mountain, Montana Mining district, two miles from Dumont; located in 1880; vein a fissure, with a crevice four feet in width, containing sulphurets of silver in a quartz gangue, which assays 180 ounces silver per ton; developed by a shaft twenty feet in depth.

**Hugo.**—T. M. Chinn, Dumont, Colo., Charles C. Welch, Golden, Colo., and C. Stevens, Idaho Springs, Colo., owners; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district; located in 1877, and patented in 1879; vein a fissure, with a crevice four feet in width, and a pay streak from two to twenty-four inches of gray copper in a quartz gangue, which assays from 100 to 440 ounces silver per ton; developed by a shaft seventy-six feet in depth.

**Hukill Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, June 28, 1876; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, James J. Kelso; secretary and treasurer, Robt. J. S. White—both New York City; agent, A. P. Webster, Idaho Springs, Colo.; offices 161 Broadway, New York City, and Idaho Springs, Colo.; owns 2000x150 feet of patented ground on Hukill vein; the two lodes, viz., Hukill and Whale, being situated on Spanish Bar, Spanish Bar Mining district, near Idaho Springs; vein a fissure, with a crevice four feet in width, and a pay streak from two to four feet in width of iron and copper pyrites carrying gold and silver, with a gangue of quartz, the first-class ore milling, when sorted, $100 net per ton, second-class $50, third-class $20; developed by two perpendicular shafts 230 feet in depth each, an incline shaft from bottom of one of these 180 feet in depth from the point of starting, and a drift 650 feet long, connecting the bottom of the two shafts; property worked by a forty-horse-power engine; and the Company also owns a concentration-works, situated near the mill, containing six Jigs of Fraser & Chalmers' make.

**Huldah Group.**—Consisting of the Huldah, Princess, Proserpine, Proteus, Argus, and Fortunatus; Charles P. Baldwin, owner; claims 1500x150 feet each; situated on McClelland Mountain, Argentine Mining district; located in 1865; veins all fissures varying in width from one to six feet, and containing argentiferous galena and gray copper ore, and a gangue-matter of quartz, which mill-runs, when sorted, from 50 to 400 ounces silver per ton.

**Idaho Concentrating and Sampling Works.**—Geo. E. Mott, Idaho Springs, Colo., owner; works situated at Idaho Springs, and consist of main building, iron-clad, 100x80 feet, containing six Jigs, two sets Cornish Rolls, one Blake Crusher, one Foster Crusher, two stationary Buttles, ten Stamps, four steam elevators, for purpose of carrying ore to Jigs and Buttles, and two mechanical Samplers, and elevator to carry the ore to them, an engine-house, also of iron, containing a forty-horse-power engine, ore-bins with a capacity of 500 tons; concentrating capacity forty tons, and sampling capacity fifty tons of ore in twenty-four hours, keeping in constant employment a force of thirteen men.

**Idaho Gold and Silver Mining Company.**—Incorporated under the laws of Colorado, in 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, W. H. Doe; vice-president, L. A. Sheare; secretary and treasurer, G. F. Hoop; general manager, Dr. Meade—all Idaho Springs Colo.; office Idaho Springs, Colo.; owns the following claims: Manchester, Little Etta, and Bulger, each 1500x150 feet, and a tunnel site 3,000 feet long; situated in Spring Gulch, Coral Mining district, three miles from Idaho Springs; veins all fissures, with crevices varying from two to six feet in width, and containing an ore of galena, iron and copper pyrites, carrying gold, silver, and copper, with a gangue-matter of quartz, which assays from 70 to 150 ounces silver per ton; Manchester developed by a shaft 100 feet in depth, Little Etta by a shaft eighty-five feet in depth, and Bulger by a shaft thirty-five feet in depth and a tunnel thirty feet in length.

**Illinois.**—Timothy Sullivan, John Horn, and Thomas Fitzpatrick, all Silver Plume, Colo., owners; claim 1500x150 feet; situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; located in 1877; vein a fissure, with a crevice thirty feet wide, and a pay streak eight inches of galena in a quartz gangue, which assays from 200 to 800 ounces silver per ton; developed by an adit 380 feet in length, a shaft 125 feet in depth, and 200 feet of levels.

**Illinois Central.**—Edward Reilly, Georgetown, Colo., and F. F. Brune, Leadville, Colo., owners; claim 1500x150 feet; situated twelve miles north of Georgetown, in Argentine Mining district; patented in 1876; vein a fissure four feet wide, containing galena in a quartz gangue, which mills, when sorted, from 50 to 250 ounces silver per ton; developed by four tunnels, 100, 150, 200, and 400 feet in length, respectively, with some drifting.



**Independence.**—O. E. Clark, Georgetown, Colo., owner; claim 1500x150 feet; situated on McClelland Mountain, East Argentine Mining district, seven miles from Georgetown; located in 1877; vein a fissure, with a crevice from three to fourteen feet in width, containing galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 100 to 300 ounces silver and $30 in gold per ton; developed by three adits, 300, 500, and 700 feet in length, respectively, and shafts aggregating 570 feet; output $300,000.

**Jack Frost.**—J. B. Johnson, Georgetown, Colo., owner; claim 1500 x150 feet; situated on McClelland Mountain, Argentine Mining district, eight miles from Georgetown; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak from one to four inches of galena and sulphurets in a quartz gangue, which assays 800 ounces silver per ton; developed by a tunnel 125 feet in length.

**Jenny Lind Group.**—Comprising the Jenny Lind, Nellie Grant, Bourbon, Rarus, and Monitor lodes; A. P. & W. D. Young, Camp Clifford, Colo., owners, claims 1500x150 feet each; situated at Camp Clifford, York Mining district and Eureka Mining district, Gilpin County, three miles from Central City; located in 1879; veins all fissures, with crevices three feet in width, containing gray and yellow copper and galena in a quartz gangue, which mill-runs, when sorted, $59 net per ton; developed by a tunnel on the Jenny Lind 225 feet in length, and shafts on the other claims from twelve to fifty feet in depth each.

**Joe Reynolds Group.**—Comprising the Joe Reynolds lodes, Nos. 1 and 2, 1500x150 feet each, No. 3, 800x150 feet, and No. 4, 1500x150 feet; owners Joseph Reynolds, office 165 Washington street, Chicago, Ill., and James M. Daily, Georgetown, Colo.; claims situated at Silver Creek and on Columbian Mountain, Montana Mining district; located 1880, and patented; veins all fissures, with crevices from six to twenty feet in width, and pay streaks from four to eighteen inches of argentiferous galena and copper pyrites in a quartz gangue, which mill-runs, when sorted, 250 ounces silver per ton; No. 1 developed by a shaft 120 feet in depth, which connects with a tunnel 110 feet in length; No. 3 developed by an adit 850 feet in length, at a depth of 450 feet from apex of mountain; No. 2 by a shaft 110 feet in depth and levels 600 feet long in the aggregate; and an adit 850 feet long, known as the Daily adit, cuts the veins in claims Nos. 1 and 2, and will cut that on No. 4 at a depth of 1,200 feet; below which adit sixty-three feet is another, the O'Connor, 1,180 feet in length; output for 1882 eighteen tons per month.

**John D. Long Group.**—Wm. Moore, Denver, Colo., and F. E. Everett, Golden, Colo., owners; group comprises the John D. Long, Columbia Extension, Platts, and Hillsdale lodes, 1500x150 feet each; situated on Columbian Mountain, Montana Mining district, near Lawson, and all patented in 1881; veins all fissures, with pay streaks from three to twenty-four inches in width, containing an ore of galena and copper pyrites carrying gold and silver, with a gangue of quartz, which mill-runs, when sorted, from $30 to $150 net per ton; John D. Long developed by shaft fifty feet in depth and levels aggregating fifty feet; Columbia Extension by a shaft 100 feet in depth and levels thirty feet in length; Platts by shafts and levels aggregating 500 feet.

**Johnson.**—Cowlter, Owsby, Cantlon, and Duncan, Georgetown, Colo., owners; claim 1500x150 feet; situated on McClelland Mountain, Argentine

Mining district, ten miles from Georgetown; located 1864, and patented; vein a fissure, with a crevice four feet wide carrying galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by four tunnels aggregating 976 feet and two shafts aggregating 163 feet; output $300,000.

**Josephine Group.**—Comprising the Josephine, Hoodoo, and Crown Jewel, 1500x150 feet each; Wm. M. Fletcher, J. M. Cook, and P. M. Forstrend, all Georgetown, Colo., owners; claims situated on Kelso Mountain, West Argentine Mining district, nine miles from Georgetown, Colo.; located 1876 and 1879; veins all fissures, with crevices from four to six feet in width, and pay streaks from one to ten inches of galena and sulphurets in a quartz gangue; developed by three shafts ten feet deep each, and two drifts 64 and 120 feet in length, respectively; in connection with which are three mill sites of five acres each.

**Junction.**—Rogers, Teller, and Linscott, Georgetown, Colo., owners; claims 1500x150 feet each; situated on Democrat Mountain, Griffith Mining district, two and one-half miles from Georgetown; located 1868, and patented; vein a fissure, with a crevice from thirty to fifty feet in width, and a pay streak from six to twenty-four inches of galena, sulphurets, and gray copper in a quartz gangue, which mill-runs, when sorted, 200 ounces silver per ton; developed by two tunnels 750 and 1,000 feet in length, respectively, and levels aggregating 2,000 feet.

**Juniata.**—(See North Hampton.)

**Kangaroo.**—(See Metropolitan.)

**Kelso.**—Owned by William F. Kelso, Denver, Colo.; claim 1500x150 feet; situated on Kelso Mountain, Argentine Mining district; located in 1865; vein a fissure, with a pay streak nineteen inches wide of argentiferous galena, gray copper, and sulphurets of silver, in a quartz gangue, which mill-runs, when sorted, from 50 to 400 ounces silver per ton; developed by a tunnel on the Flag-staff Group.

**Kentucky and Colorado Gold and Silver Mining Company (The).**—Incorporated under the laws of Kentucky; capital stock $100,000, in 100 shares of $1,000 each, non-assessable; president, Henry L. Pope; secretary, J. R. Dupuy—both Louisville, Ky.; treasurer and general manager, Theo. H. Lowe, Idaho Springs, Colo.; offices Louisville, Ky., and Idaho Springs, Colo.; owns ten claims, 1500x150 feet each; situated on Seaton and Hiawatha Mountains, in Idaho and Morris Mining districts; veins all fissures, with crevices from two to ten feet in width, containing argentiferous galena and iron pyrites in a quartz gangue, which mill-runs, when sorted, an average of $40 per ton; developments are principally on the Robinson, which has a shaft 120 feet in depth.

**Keystone Group.**—Owned by Walter Edwards & Co., 120 Broadway, New York City; group comprises five claims, 1500x150 feet each; situated on McClelland Mountain, West Argentine Mining district, eleven miles from Georgetown; located in 1880; veins all fissures, with crevices from four to ten feet in width, and pay streaks about eighteen inches of galena in a quartz gangue, which assays from forty to fifty ounces silver per ton; developed by a shaft eighty feet in depth and a tunnel 120 feet in length.

**Killbride.**—Owned by Chas. Des Moins, Brownville, Colo.; claim 1500x150 feet; situated on Brown Mountain, Queen Mining district, three miles from Georgetown; located in 1869, and patented; vein a fissure, with a crevice from four to five feet wide, and a pay streak from two to twelve inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 300 ounces silver per ton; developed by two shafts 80 and 130 feet in depth, respectively, and levels aggregating 300 feet; output $15,000.



**Kinda.**—Owners D. S. Green, Central City, and Mary E. Eckhardt, Denver, Colo.; claim 1500x150 feet; situated on the west slope of Bellevue Mountain, Lower Fall River Mining district; located in 1876, and in process of patent; vein a fissure, with a crevice from four to eight feet wide, and a pay streak from four inches to four feet of iron and copper pyrites carrying gold, chlorides, and sulphurets carrying silver, with a gangue-matter of quartz, which mill-runs, when sorted, from two to five ounces gold per cord—and the smelting-ore runs $19.50 per ton net; developed by a shaft fifty feet in depth, from the bottom of which there is an adit 213 feet in length on the vein.

**Kirtley.**—Kirtley Tunnel Mining Company, owners; claim 1500x150 feet; situated on Leavenworth Mountain, about two miles from Georgetown, Griffith Mining district; located in 1877; vein a fissure, with a crevice from three to six feet wide, containing a vein-matter of quartz, and ore of galena and gray copper, milling, when sorted from the gangue-rock, from 100 to 250 ounces silver per ton; developed by a tunnel cutting the vein at a considerable depth, with levels running therefrom, and some stoping.

**Kitty Clyde.**—W. D. Warren and G. S. Raymer, both Idaho Springs, owners; claim 1500x150 feet; situated in Spring Gulch, Coral Mining district, three miles from Idaho Springs; located in 1872, and patented in 1882; vein a fissure, with a crevice four feet wide, and a pay streak from three to eighteen inches of iron and copper pyrites, galena, and gray copper, carrying gold and silver, with a gangue-matter of quartz, which mill-runs $35 per ton, after sorting; developed by a shaft 190 feet in depth and 200 feet of levels.

**Knickerbocker and Annie R.**—David M. DeWitt and others, Georgetown, Colo., owners; claim 1500x150 feet each; situated on Sherman Mountain, Griffith Mining district, two and one-half miles from Georgetown, and patented; vein a fissure, four feet wide, pay streak four inches, composed of galena, sulphurets, and iron in a quartz gangue; developed by a tunnel sixty feet in length and two shafts twenty-five and thirty-five feet in depth, respectively.

**Kohinoor and Donaldson Consolidated Mining Company.**—(*Limited*); incorporated under the laws of Great Britain; capital stock £100,000, in 100,000 shares of £1 each; president, John Elliot; secretary, Wm. Herbert Rowe—both London, England; general manager, Alfred Rickard; resident director, Nathaniel Sands—both Idaho Springs, Colo.; office Rooms 27, 28, and 29 Albert Block, No. 51 Queen Victoria street, London, England, and Idaho Springs, Colo.; owns the Champion and Telephone two adjoining lodes on the same vein, making a length of 3,000 linear feet; situated on Bellevue Mountain, Idaho Mining district; located in 1874, and patented; vein a fissure, with a crevice from two to twelve feet in width, and a pay streak about three feet, containing an ore of argentiferous galena and zinc blende, with copper pyrites and gray copper in a gangue-matter of quartz, which mills, when sorted, $14 net per ton, while the smelting-ore yields a net average of $70 per ton; developed by a shaft 556 feet in depth, drifts aggregating 646 feet; worked by a fifty-horse power engine; and the Company will be ready for taking out ore in large quantities when their mill, now in course of construction is completed.

Also owns the Donaldson, 1500x150 feet; situated opposite Kelly Mountain, Trail Run and Coral Mining districts; vein a fissure, with a crevice from four to twelve feet in width, containing in one place a body of solid mineral

seven feet wide, but the average of the pay streak is about twenty inches of iron and copper pyrites carrying both gold and silver, with a gangue-matter of quartz, the first-class ore milling, when sorted, from $100 to $125, the second-class from $50 to $100, and the stamping-ore from $30 to $35 per ton; developments—one shaft 312 feet in depth and six levels aggregating 1,700 feet in length; improvements—one twenty-horse-power engine; output fifty tons per day, and it is estimated that there is 12,000 tons in sight.

Also owns the Kohinoor lode 1500x150 feet; situated near Lawson, Empire Mining district, and patented; vein a fissure, with a crevice from one to five feet wide, containing native and brittle silver and gray copper in a quartz gangue, which mills, when sorted, from 500 to 3,000 ounces silver per ton; developed by a tunnel 300 feet long and a shaft, from floor of tunnel, 250 feet in depth; worked by twenty-horse-power engine, and both lighted and worked by electricity; output $100,000.

Also owns a concentration-works, situated near Spanish Bar, five miles from Idaho Springs; main building 160x50 feet, with a wing to the same for an electric-light plant; main building contains two sets Cornish Rolls, six sets Hartz Improved Double-compartment Jigs, and twenty Stamps of 750 pounds each, automatic Screens, and ten Frue Vanning Machines, run by four Leffel Miners' Turbine Water-wheels, and has capacity to treat 200 tons in twenty-four hours; the works being connected with the Champion mine, a distance of 6,000 feet, and the Donaldson mine, a distance of 3,100 feet, by Halladay's Improved Wire-rope Tramways, which convey the ore from those mines to the mill, where it is treated automatically.

**La Cross.**—Thomas Lloyd, Silver Creek, Colo., and Thomas C. Parish, Colorado Springs, Colo., owners; claim 1500x150 feet; situated at Silver Creek, on Columbian Mountain, Montana Mining district; located in 1879, and patented in 1881; vein a fissure, with a crevice varying from two to fifteen feet in width, containing argentiferous galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 100 to 800 ounces silver per ton; developed by a shaft 184 feet in depth, a tunnel on vein 384 feet in length, and levels aggregating 240 feet; output $1,000.

**Lafayette Mining Company.**—Incorporated under the laws of New Jersey, October, 1882; capital stock $540,000, in 108,000 shares of $5 each, non-assessable; 8,000 shares preferred stock; president, Robert Barbour, Paterson, N. J.; secretary, Robert J. S. White; treasurer, D. B. Halstead—both New York City; superintendent, John A. McCuen, Idaho Springs, Colo.; offices 161 Broadway, New York City, and Idaho Springs, Colo.; owns the Lafayette and Mayflower lodes, 1500x150 feet each; situated at Spanish Bar, Spanish Bar Mining district; and the Graff Placer claim on Spanish Bar, 1500x400 feet; veins all fissures in the Lafayette, the crevice being four feet wide, filled with argentiferous galena and yellow copper, carrying gold and silver, with a quartz gangue-matter, which mill-runs, when sorted, from $30 to $300 per ton; and in the Mayflower the ore is similar in character, and milling from $30 to $250 per ton, when sorted; Lafayette developed by a shaft sixty-six feet in depth and an adit on the vein seventy-five feet long, and Mayflower by a shaft 125 feet in depth and levels aggregating 540 feet; worked by a twenty-four-horse-power engine and six-inch Knowles Pump; have shipped a large quantity of ore.

**Lebanon Mining Company (The).**—Incorporated under the laws of New York, October 24, 1870; capital stock $1,000,000, in 10,000 shares of $100 each; president and superintendent, Dr. Julius G. Pohle; secretary and treasurer, Thomas S. Ollive—both New York City; offices 88 Elizabeth street, New York City, and Georgetown, Colo; owns the Lebanon Tunnel site, 3000x6 feet; situated on Republican Mountain, Griffith Mining district, one mile from Georgetown; on which a tunnel is driven over 1,200 feet in length, cutting the veins in twelve lode claims, all owned by the Company, at depths varying from 80 to 600 feet long; all of which, and especially No. 5, have been successfully operated; and in running into the Elijah Hise lode, cutting it at right angles to the course of the vein, a large body of smelting-ore, and a still larger one of concentrating-ore was encountered; this claim having been located in 1865, and patented; vein a fissure, from six to ten feet wide, and a pay vein in the upper workings from two to ten inches of galena in a quartz gangue, milling, when sorted, from 100 to 300 ounces silver per ton.



**Lee.**—J. F. Wickham, Oris Herbert, and Henry Herbert, all Dumont, Colo., and J. P. Herbert, New Jersey, owners; claim 1500x150 feet; situated on Albro Hill, Morris Mining district, one and one-half miles from Dumont; vein a fissure, with a crevice six feet wide, and a pay streak three inches of iron pyrites and galena carrying silver, with a gangue-matter of quartz; developed by a tunnel 200 feet in length.

**Legal Tender.**—75x750 feet; situated on the east side of Ohio Gulch, two and one-half miles from Mills City, and patented in 1874; owners—Geo. E. and Rufus H. Snider, both Denver; vein a fissure four feet wide, pay streak fourteen inches of galena in a quartz gangue, which mills, when sorted, sixty per cent lead and twelve ounces silver per ton; developed by one forty-foot shaft and a series of openings on the vein.

**Lehigh and Delaware.**—Thomas Weaver, Georgetown, Colo., owner; claims 1500x150 feet each; situated on Kelso Mountain, West Argentine Mining district, nine and one-half miles from Georgetown; located in 1879; vein a fissure, with a crevice four feet wide of quartz and galena, which assays ninety-five ounces silver per ton; developed by an adit forty-five feet long and a tunnel 130 feet in length.

**Leslie Norwood.**—Stephen Burrell and Michael Smith, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Griffith Mountain, Griffith Mining district, at Georgetown; located in 1881; vein a fissure, with a crevice four feet in width of quartz seamed with galena, which assays from fifteen to fifty ounces silver per ton; developed by an adit 150 feet in length.

**Lewis.**—1500x150 feet; situated on the south-west slope of Cavode Mountain, one-fourth mile from Empire, Upper Union district; located February, 1877; owners—Cyrus Strong, H. H. Powars, and E. C. Guibor, all Denver; vein a fissure four feet wide, and pay streak eleven inches of mineralized quartz, which mill-runs two ounces gold and 200 ounces silver per ton; developed by one twenty-five-foot shaft and one forty-five-foot drift on the vein.

**Lincoln.**—Harry Lewes & Co., Dumont, Colo., owners; claim 1500x150 feet; situated on Pitcher Mountain, Downieville Mining district, one mile from Dumont; located in 1882; vein a fissure, with a crevice three feet wide, and a pay streak eight inches of iron pyrites and galena carrying gold and silver, with a gangue-matter of quartz, which assays thirty-two ounces silver and one ounce gold per ton; developed by two shafts twelve and fourteen feet in depth, respectively.

**Lincoln Mining Company (The).**—Manager and agent, Duncan McArthur, Georgetown, Colo.; owns the Fred Rogers and Government lodes, 1500x150 feet each; situated on Democrat Mountain, Griffith Mining district, two and one-half miles from Georgetown; both patented; veins both fissures, with crevices from five to thirty feet in width, and pay streaks from one to two and one-half inches of argentiferous galena, silver glance, and gray copper, which mill-runs, when sorted, from 100 to 1,000 ounces silver per ton; developed by a shaft 290 feet in depth, drifts aggregating 750 feet, and a tunnel 160 feet in length; worked by a forty-horse-power engine; output $200,000.

**Lindstrom Tunnel.**—Owned by Paul Lindstrom, Central City, Colo.; claim 1500x150 feet; situated in Upper Union Mining district, one-fourth mile from Empire; located in 1860; vein a fissure, with a crevice one and one-half feet wide, and a pay streak from six inches to one foot of argentiferous galena in a quartz gangue, which assays seventy ounces silver per ton; developed by a tunnel 120 feet in length driven on the tunnel site, cutting the vein above described, on which a lode location has been made.

**Little Agie.**—Owners Hugh Loughran and Enos Loughran, both Central City, Colo.; claim 1500x150 feet; situated on Bellevue Mountain, York Mining district, near Fall River; located in 1881; vein a fissure, with a crevice twenty-two feet in width containing argentiferous galena, native silver, and sulphurets, with a gangue-matter of quartz; developed by a shaft fifteen feet in depth.

**Little Anna.**—Owners David Hill and John McIntosh, both Georgetown, Colo.; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, three miles from Georgetown, and patented; vein a fissure, with a crevice from two to four feet in width, and a pay streak from one to eight inches of galena in a quartz gangue, which assays from 200 to 600 ounces silver per ton; developed by a tunnel 300 feet in length.

**Little Chief and Great Western.**—Owners Wm. Mathews and Thomas Woodley, both Georgetown, Colo.; claims 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district; located in 1870 and 1871; veins both fissures, with crevices from four to sixteen feet in width, and pay streaks from one to ten inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 150 ounces silver per ton; developed by a shaft thirty feet in depth and two tunnels thirty and fifty feet in length, respectively.

**Little Daisy.**—Owners N. A. Olson, J. F. Philips, Andrew Reed, and B. Willis, all Red Elephant, Colo.; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak two inches of argentiferous galena in a quartz gangue, which mill-runs, when sorted, thirty per cent lead and 270 ounces silver per ton; developed by a shaft forty feet in depth.

**Little Emma Group.**—(See Good Luck Mining and Milling Company.)

**Little Giant.**—P. R. Smith, Samuel G. Smith, and W. D. Johnson, all Denver, Colo., and James Collins, Central City, Colo., owners; claim 1500x150 feet; situated in Virginia Mining district, near Central City; vein a fissure, with a crevice two and one-half feet in width, containing an ore of galena and iron and copper pyrites, carrying gold and silver, with a gangue-matter of quartz, from which assays have been made as high as thirty ounces gold per ton; developed by a shaft thirty feet in depth and a level forty feet in length.

**Little Hatchet.**—Robert McBride and others, Dumont Colo., owners; claim 1500x150 feet; situated on Albro Mountain, Morris Mining district, three-fourths mile from Dumont; located in 1881; vein a fissure, with a crevice five feet wide of quartz, carrying free gold; developed by a shaft fifty-five feet in depth.

**Little Jack Group.**—E. S. Weaver, H. C. Vandeusen, and others, Georgetown, Colo., owners; comprises the Little Jack, Little Wonder, Thos. Foster, Fairview, and one other lode, all 1500x150 feet each; situated on Independence Mountain, Griffith Mining district, two and one-half miles from Georgetown, Colo., and all in process of patent; veins all fissures, with crevices from five to twenty feet in width, and pay streaks from five to eighteen inches of galena and gray copper in a quartz gangue, which assays from 100 to 200 ounces silver per ton; developed by a cross-cut tunnel 430 feet in length, four drifts aggregating 290 feet, and shafts aggregating 120 feet.



**Little Julia and Chadbolt.**—J. L. Landis & Co., Georgetown, Colo., owners; claims 1500x150 feet each; situated on Democrat Mountain, Union Mining district, two and one-half miles from Georgetown; located in 1882; vein a fissure, with a crevice six feet in width, containing seams of silver-bearing quartz, on which assays have been obtained as high as 800 ounces silver per ton; developed by a tunnel eighty feet in length and a shaft fifty feet in depth.

**Little Mack and Cashier.**—P. Morris and M. J. McKinley, both Idaho Springs, owners; claims 1500x150 feet each; situated in Hukill Gulch, Spanish Bar Mining district, one mile from Idaho; located 1880, and patented 1882; vein a fissure, with a crevice in the Little Mack ten feet and a pay streak one foot, and in the Cashier four feet wide and a pay streak eight inches of argentiferous galena in a quartz gangue-matter, which assays 163 ounces silver per ton; Little Mack developed by an adit on the vein fifty feet long, and a tunnel fifty feet long; Cashier by shaft fourteen feet in depth.

**Lone Tree.**—John M. Dumont, Spanish Bar, and George G. Vivian, Freeland, owners; claim 1500x150 feet; situated at Freeland, in Trail Run Mining district, and patented; vein a fissure, with a crevice from three to six feet in width, containing argentiferous galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from $40 to $50 per ton; developed by shafts and drifts aggregating 400 feet; property is making regular shipments.

**Long Group.**—(See John D. Long Group.)

**Louisiana Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Stephen A. Bemis; secretary and treasurer, D. E. Garrison—both St. Louis; superintendent, R. W. Steele, Georgetown; office 221 Olive street, St. Louis, and also at Georgetown; owns the Louisiana, 1500x150 feet; situated on the south slope of Sherman Mountain, three miles from Georgetown, and patented 1880; vein a fissure two feet wide, pay streak six inches of galena, ruby and native silver in a quartz gangue, which mills fairly and is improving with depth; developments—one shaft 125 feet deep and some drifting.

**Louisville and Mill City Gold and Silver Mining Company (The).**—Incorporated under the laws of Kentucky; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; secretary and treasurer, Robt. Cunningham, Louisville, Ky.; general manager, Theo. H. Lowe, Idaho Springs, Colo.; offices at First National Bank, Louisville, Ky., and Idaho Springs, Colo.; owns the Rufus Snyder, Johnson, and six other lodes; situated on Albro Mountain, Morris Mining district, three-fourths mile from Dumont; veins all fissures, with crevices varying from two to four feet in width, and pay streaks averaging eight inches of iron pyrites and gold-bearing quartz, which mill-runs, when sorted, $100 per ton.

**Lucas.**—Wm. M. Wright and J. Rippin, both Russell Gulch, owners; claim 1500x150 feet; situated in Virginia Cañon, Idaho Mining district, three miles from Idaho Springs; located 1875, and patented 1881; vein a fissure, with a crevice four feet wide containing a silver-bearing ore and a gangue-matter of quartz, which assays from twenty to seventy-five ounces silver per ton; developed by two shafts forty and sixty feet in depth, respectively.

**Lucerne Mining Company (The).**—Incorporated under the laws of New York; capital stock $5,000,000, in 50,000 shares of $10 each, non-assessable; owns the Lucerne, 1000x50 feet, Lucerne Annex, 1500x150 feet, Second Lucerne, 1000x150 feet; situated in Robinson Gulch, Idaho Mining district, two miles from Idaho Springs; located from 1860 to 1863, and patented from 1872 to 1881; veins all fissures, with crevices averaging twelve inches in width of iron and copper pyrites carrying gold, and galena carrying silver, which mill-runs, when sorted from the gangue-matter, from two to six ounces gold per cord; Lucerne developed by a drift 100 feet in length, Lucerne Annex by a drift fifty feet in length, and Second Lucerne by a shaft 150 feet in depth.

**Lucky Hesperus.**—3000x50 feet; situated on Democrat Mountain, about two miles from Georgetown, Griffith district; located 1867; vein a fissure five feet wide, pay streak from two to eight inches of galena and gray copper in a quartz gangue, milling, when sorted, from 50 to 200 ounces silver per ton; developments consist of one 500-foot shaft and about the same amount of levels.

**Lycurgus.**—James Hall and John Sullivan, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district, two and one-half miles from Georgetown; located in 1880; vein a fissure, with a pay streak from four to five inches wide of argentiferous galena in a quartz gangue, which assays fifty ounces silver per ton; developed by two cross-cuts thirty and fifty feet in length, respectively, and the lodes will be opened up by the Hall Tunnel, which is now 250 feet in length.

**McClelland.**—3000x50 feet; situated on Leavenworth Mountain, about three miles from Georgetown, Griffith district; located in 1868; vein a fissure four feet wide, pay streak from ten to twenty-five inches of galena in a quartz gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developments—one main shaft 350 feet deep, with some levels and stoping.

**Mackey and Minnesota.**—Michael Doyle, Dumont, Colo., L. Cohen, Georgetown, Colo., and Gardner B. Weeks, Syracuse, N. Y., owners; claims 1500x150 feet each; situated on Caledonia and Iowa Mountains, Morris and Iowa Mining districts; located in 1878, and Mackey patented in 1881; veins both fissures, with crevices about five feet in width, and pay streaks eighteen inches of iron and copper pyrites carrying gold, which assays $68 per ton, with a quartz gangue-matter; developed by a shaft 148 feet in depth.

**Mammoth.**—Situated on the Brown's Gulch slope of Brown Mountain, about four miles from Georgetown; vein a fissure, varying in width, and containing a body of heavy galena in a quartz gangue, which is now being exploited, but as yet is not in what might be considered good-pay ore.

**Maple-leaf Group.**—(See Gilpin County.)

**Manhattan.**—Owned by David M DeWitt, Georgetown; claim 150x1250 feet; located in 1875; situated on Sherman Mountain, near Brownville, Griffith Mining district, three miles from Georgetown; vein a fissure three feet wide, pay vein twelve inches; developments—three shafts aggregating 100 feet in depth and one tunnel fifty feet in length.

**Manhattan Gold and Silver Mining Company (The).**—Owns the Thompson, Sterling, Ringgold, Thunderbolt, Beaver, Lennox, Kenton, Lamar, and Melverne lodes; situated at the junction of Cascade and Ute Creeks, Cascade district; for the development of which the Company is running a tunnel, the Manhattan now over 100 feet long, designed to cut the nine veins at varying depths; veins all fissures in the Thunderbolt, as shown by a shaft about 100 feet deep sunk thereon, nine feet wide, which is producing a very fair material.



**Mansfield Milling and Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $32,000, in 3,200 shares of $10 each, non-assessable; president, M. Harrington; secretary and treasurer, William Niman—both Mansfield, Ohio; general manager, Amos Knabb, Dumont, Colo.; offices Mansfield, Ohio, and Dumont, Colo.; owns the Mansfield, Milton, Franklin, Pay Rock, and Pioneer lodes, 1500x150 feet each; situated on Albro Hill, Morris Mining district, one mile and a half from Dumont, and in all process of patent; veins all fissures, with crevices varying from two to six feet in width, and containing copper pyrites and galena carrying gold and silver, with a gangue-matter of quartz; Milton developed by a shaft 250 feet in depth and a cross-cut tunnel 200 feet in length, and Pioneer by a shaft 120 feet in depth, and a tunnel 200 feet in length.

Also owns a stamp mill, main building 80x60 feet; situated at Albro Hill, one mile and a half from Dumont, containing thirty stamps, with a capacity to treat thirty tons in twenty-four hours; run by water-power.

**Marshall Silver Mining Company (The).**—Incorporated under the laws of Colorado, September 25, 1868; capital stock $600,000, in 6,000 share of $100 each, non-assessable; owns the Samuel J. Tilden and a number of other patented locations adjoining each other on the same vein, a fissure, varying in width from five to fifteen feet, with a pay streak from five to fifteen inches; milling, when sorted, from $100 to $500 per ton; developed by a large number of tunnels, levels, and shafts; property situated on Leavenworth Mountain, about two miles from Georgetown, Griffith Mining district.

**Mascott, West Summit, and Delaware.**—H. C. Parker, Georgetown, Colo., owner; claims 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district; located in 1880 and 1881, and patented; veins all fissures, with crevices from four to twenty feet in width, and pay streaks from ten to twenty inches of galena and copper pyrites in a quartz gangue, which mills, when sorted, four ounces gold and thirty ounces silver per ton; developed by an adit 570 feet in length and drifts aggregating 175 feet.

**Mauch Chunk.**—Martin H. Nash and John S. Fisher, both Georgetown, Colo., owners; claim 3000x150 feet; situated on Columbian Mountain, Montana Mining district, two miles from Lawson; located in 1875; vein a fissure, with a crevice four feet wide, and a pay streak from one to six inches of galena and sulphurets in a quartz gangue, which mills, when sorted, from 200 to 400 ounces silver per ton; developed by three tunnels, 60, 100, and 150 feet in length, respectively; output $5,000.

**Maud S.**—Owners William A. Hamill, W. P. Farris, and George B. Tyler, all Georgetown, Colo.; claim 1500x150 feet; situated on Douglass Mountain, Griffith Mining district, four miles north of Georgetown; located in 1881, and patented; vein a fissure ten feet wide, and a pay streak from six to eighteen inches of argentiferous galena and copper in a quartz gangue, which mill-runs, when sorted, 160 ounces silver per ton; developed by two adits on the vein 80 and 250 feet in length, respectively, and a shaft sixty feet in depth.

**Maud Monroe Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $700,000, in 70,000 shares of $10 each, non-assessable; president, D. C. Barber, Tamarora, Ill.; vice-president, W. C. Monroe, Buffalo, N. Y.; secretary and general manager, J. J.

Elliot, Idaho Springs, Colo.; treasurer, D. G. Miller, Denver, Colo.; office Idaho Springs, Colo.; owns the Maud Monroe lode, 1500x150 feet; situated on Spanish Bar, Spanish Bar Mining district, one and one-fourth miles from Idaho Springs; located in 1880, and patented in 1882; vein a fissure, with a crevice twenty-four feet wide, and a pay streak from nine to eighteen inches of sulphides and oxides of copper and galena, carrying gold and silver, which mill-runs, when sorted from the gangue-matter, $75 per ton; the concentrating-ore yielding about $20 per ton; developed by an adit 183 feet in length; output $2,000.

**Maurice.**—Owners J. F. Cypher, Wm. Mendenhall, A. Blackman, and M. W. Mayers, all Georgetown, Colo.; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, at Lawson; located in 1877, and patented; vein a fissure, with a crevice six feet wide, and a pay streak six inches of galena in a quartz gangue, which assays from 50 to 600 ounces silver per ton; developed by two shafts twenty-five and thirty feet in depth, respectively, and an adit sixty feet in length.

**Maximilian.**—Owned by Thos. B. Bryan, Idaho Springs, Colo.; claim 1500x150 feet; situated four miles from Idaho Springs, in the Cascade Mining district; located in 1880, and in process of patenting; vein a fissure, with a crevice five feet wide, and a pay streak from four to six inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, $350 per ton; developed by a shaft sixty-eight feet in depth and forty feet of levels.

**May Meyer.**—Owners A. Dickerson and Wade Townsend, both Georgetown, Colo.; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district, one-half mile from Georgetown; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak two inches of argentiferous galena in a quartz gangue, which assays fifty ounces silver per ton; developed by twenty-seven feet of tunnels.

**Mayflower.**—Owned by Edward Reiley & Co., Georgetown, Colo.; claim 1500x150 feet; situated on McClelland Mountain, West Argentine Mining district, three miles from Georgetown; located in 1872; vein a fissure, with a crevice four feet wide, and a pay streak four inches of galena in a quartz gangue, which mill-runs, when sorted, from forty to seventy ounces silver per ton; developed by an adit ninety feet in length.

**Memphis Mining Company.**—Incorporated under the laws of Colorado, in 1880; president and treasurer, Milo A. Smith, Denver, Colo.; office Denver, Colo.; owns the Memphis, Elmira, Fanny, Grace, Nora, and Maggie lodes, 1500x150 feet each; situated on McClelland Mountain, Argentine Mining district; located in 1880; ore—argentiferous galena in a quartz gangue, which mills, when sorted, from 50 to 150 ounces silver per ton; developments – one tunnel 100 feet long.

**Mendota and Heywood.**—Thomas B. Bryan, Idaho Springs, Colo., and Peck & Heywood, Georgetown, Colo., owners; claims 1500x150 feet each; situated on Leavenworth Mountain, Upper Union Mining district; located in 1870, and patented; veins both fissures, with pay streaks averaging three inches in width, composed of galena and a quartz gangue-matter, which assays eighty ounces silver per ton; developed by two adits eighty feet in length each.

**Mendota Group.**—Comprising the Mendota, Fulton, and Pay Muster; R. O. Old, Georgetown, Colo., owner; claims 1500x150 feet each; situated on Sherman Mountain, Griffith Mining district, three miles from



Georgetown, and all patented; veins are fissures, with crevices from three to five feet in width, and pay streaks from six to fifteen inches of galena in a quartz gangue, which mill-runs, when sorted, considerable lead and thirty ounces silver per ton; developed by five shafts aggregating 330 feet, levels aggregating 345 feet, and the Victoria Tunnel will intersect the veins at a depth of 600 feet; output $31,000; in connection with which are two mill sites covering eight acres.

**Metropolitan and Kangaroo.**—Gustavus Hogland and Peter G. Gustafson, both Idaho Springs, Colo., John Anderson, Black Hawk, Colo., and others, owners; claims 1500x150 feet each; situated on Seaton Mountain, Idaho Mining district; located in 1873, and patented in 1882; veins all fissures, with crevices from two to six feet in width, and pay streaks from six inches to two feet of galena in a quartz gangue-matter, which mill-runs, when sorted, from 50 to 350 ounces silver per ton; developed by a tunnel designed to cut both lodes, now 450 feet in length, a shaft on the Kangaroo 160 feet in depth and eighty feet of levels, a shaft on Metropolitan 300 feet in depth and 300 feet of levels; the veins on this property are cut by Idaho Tunnel.

**Miners' Sampling Works.**—Church Bros., Georgetown, Colo., owners; building situated at Georgetown, containing Dodge Crushers, Cornish Rolls, etc., and has a capacity for sampling forty tons of ore per day.

**Minnesota.**—(See Mackey.)

**Mint Group.**—Comprising the Mint, Mint Extension, Pocahontas, Tornado, and Coach, 1500x150 feet each; J. H. Boun, Georgetown, Colo., owner; claims situated on McClelland Mountain, West Argentine Mining district, six miles from Georgetown; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from six inches to two feet of sulphurets, galena, and chlorides, in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by one main shaft eighty feet in depth, other shafts aggregating 100 feet, and adits aggregating 150 feet; output $1,200.

**Monarch.**—Mary M. Smith, Georgetown, Colo., owner; claim 1500x150 feet; situated on Democrat Mountain, Griffith Mining district, one-half mile from Georgetown; located in 1880; vein a fissure, with a crevice thirty feet wide, containing four pay streaks of galena and yellow copper from one to ten inches in width, with a gangue of quartz, which mill-runs, when sorted, from fifteen to fifty ounces silver per ton; developed by an adit 300 feet in length.

**Monarch.**—(See Dictator and Monarch.)

**Monitor.**—Amos Knabb and Vincent Green, both Dumont, Colo., owners; claim 730x150 feet; situated on Hiawatha Hill, Morris Mining district, one and one-half miles from Dumont; located in 1879, and patented 1882; vein a fissure, with a crevice from four to five feet in width, containing seams of copper pyrites and gray copper in a quartz gangue, which assays from $32 to $100 per ton; developed by a shaft 100 feet in depth.

**Mono.**—W. O. McFarlane, Alexander McLeod, Wm. Nicholson, and M. O. Williams, all Central City, Colo., owners; claim 1500x150 feet; situated on Champion Hill, Idaho Mining district; located in 1879, and in process of patent; vein a fissure, with a crevice varying from one to four feet wide, and a pay streak twelve inches of iron and copper pyrites carrying gold and silver, with a gangue of quartz, which mill-runs, when sorted, from four to fifteen ounces gold per cord, the smelting-ore yielding $150 per ton; developed by a tunnel twenty-five feet in length, and a shaft from end of tunnel 110 feet in depth.

**Moore Mining and Smelting Company (The.)**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Wm. Moore, Denver, Colo.; secretary and treasurer, R. D. Hall; general manager, F. E. Everett—both Golden, Colo; office Golden, Colo.; owns the Murray lode, 1500x150 feet; situated on Columbian Mountain, Montana Mining district, at Lawson, and patented; vein a fissure, with a crevice twenty feet wide, and a pay streak from six to twenty inches of yellow copper and galena in a quartz gangue, which mill-runs, when sorted, ten per cent copper and seventy ounces silver per ton; 900 feet on the west end of this lode is leased to S. Z. Hoyle, Golden, and is developed by a shaft 325 feet in depth, worked by a forty-horse-power engine; output $2,000 per month; 600 feet on the east end is leased to James Hoskins, Downieville, Colo, and Wm. Wheelock, Lawson, Colo., and is developed by shafts 120 feet in depth; output $2,000 per month.

**Mount Pleasant.**—James Freel and Wm. McPherson, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Saxon Mountain, Griffith Mining district, three miles from Georgetown; located in 1875; vein a fissure, with a crevice four feet wide, and a pay streak from six to twenty inches of galena and sulphurets in a quartz gangue, which assays from 300 to 600 ounces silver per ton; developed by a shaft fifty feet in depth and a cross-cut tunnel 200 feet in length.

**Mountain Belle Group.**—Richard Berry, George Howe, and Walter Rumble, all Georgetown, Colo., owners; group comprises the Mountain Belle, Georgia, Wood, and Mountain Eagle lodes, 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district, two miles from Georgetown; located in 1882; veins all fissures, with crevices from two to four feet wide, containing quartz seamed with galena and sulphurets, which assays from 200 to 1,000 ounces silver per ton; developed by five adits aggregating 500 feet in length.

**Murphy.**—Joseph Vandervoort and G. W. Cawles, both Empire, Colo., and Thomas A. Bradford, Pueblo, Colo., owners; claim 1500x150 feet; situated on Silver Mountain, Upper Union Mining district; vein a fissure, with a crevice three feet wide, and a pay streak from three to six inches in width of iron and copper pyrites carrying gold, with a gangue-matter of quartz, which mill-runs, when sorted, from three to eight ounces silver per ton; developed by a tunnel 105 feet in length and a drift on the vein 50 feet in length.

**Muscovite.**—R. H. Worthington, Denver, Colo., owner; claim 1500x 150 feet; situated on Ute Creek, Cascade Mining district, four miles from Idaho Springs; located in 1879, and patented in 1882; vein a fissure, with a crevice ten feet wide, containing pockets of silver sulphurets in a quartz gangue, which mill-runs, when sorted, 200 ounces silver per ton; developed by two adits on the vein 200 feet long each; output sixty tons of ore.

**Napoleon.**—Owned by Rawley W. Chinn, Denver, Colo.; claim 1500x 150 feet; situated between Ohio and Sherman Mountains, Montana Mining district, one-half mile from Dumont; relocated in 1883; vein a fissure, with a crevice four feet in width containing iron pyrites and galena carrying gold and silver, with a gangue-matter of quartz; developed by an adit on the vein twenty-five feet in length.

**Narragansett Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, October 6, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Thomas H. Hawkins; vice-president, Ebenezer Beard; secretary, H. B. Chamberlain; treasurer, V. E. Holley—all Denver, Colo.; offices 242 Fifteenth street, Denver, and at Idaho Springs, Colo.; owns the following claims, viz.: Lou L., Jennie C., Leo, K. K. G., Capatolia, Jessie K., Hattie, Lou B., Maggie S., Melvern, all 1500x150 feet each, and the Narragansett Tunnel site, 3,000 feet long; situated on Bellevue Mountain, Idaho Mining district, one and one-half miles from Idaho Springs; veins all fissures, with crevices from two to eight feet in width containing iron pyrites carrying gold and galena carrying silver, with a gangue-matter of quartz; developed by shafts aggregating seventy-five feet in depth and one tunnel twenty feet in length.



**Native American.**—Owners H. M. Miller and E. Wall, both Georgetown, and T. M. Chinn, Dumont, Colo.; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district; located in 1877, and patented in 1879; vein a fissure, with a crevice five feet wide, and a pay streak two feet of galena and gray copper in a quartz gangue, which assays seventy-six ounces silver per ton; developed by an adit on the vein 140 feet in length.

**National Bank Group.**—Owned by R. O. Old, Georgetown, Colo.; group comprises ten patented claims, 1500x150 feet each, and nine patented mill sites, five acres each; situated on Deer Mountain, Lincoln Mining district, at Fall River; veins all fissures, with crevices from three to nine feet in width, and pay streaks from three to twelve inches of galena in a quartz gangue, which assays from 100 to 500 ounces silver per ton; developed by the British Tunnel 1,060 feet in length, cutting two of the lodes.

**Neith.**—Owners G. and S. H. Vivian and John Dumont, all Empire, Colo.; claim 1500x150 feet; located in 1875; situated on Cavode Mountain, Upper Union Mining district, one-half mile from Georgetown; vein a vertical fissure five feet wide, pay streak from six inches to three feet, containing copper and iron pyrites in a quartz gangue, which yields, when sorted, an average of $50 per cord; developed by an adit 360 feet in length.

**New Columbia Consolidated Mining Company (The).**—(See Gilpin County.)

**New England Group and Mill Sites.**—William B. Hood, Georgetown, Colo., owner; group comprises seven claims, 1500x150 feet each, and two mill sites, five acres each; situated on Red Elephant Mountain, Downieville Mining district, five and a half miles from Georgetown; located in 1880 and 1881, and patented; veins all fissures, with crevices from three to twelve feet in width, and pay streaks from four to twelve inches of galena in a quartz gangue, which mill-runs when sorted, from 100 to 200 ounces of silver per ton; developed by two tunnels 100 and 225 feet in length respectively; output $10,000.

**New North-west Group.**—(See North-west Group.)

**Nianza Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, Jasper R. Rand; secretary, A. W. Higgins; treasurer, Edward Greene—all New York City; superintendent, John Fillins, Georgetown, Colo.; offices 240 Broadway, New York City, and Georgetown, Colo.; owns the Nianza and Fanning lodes 1500x150 feet each; situated on Democrat Mountain, Griffith Mining district, two and a half miles from Georgetown, and Nianza patented; veins both fissures, with crevices averaging five feet in width, and pay streaks from three to eight inches of galena in a quartz gangue, which mill-runs, when sorted, 145 ounces silver per ton; developed by an adit 900 feet in length and five shafts aggregating 260 feet.

**Nig.**—John A McCuen and Thomas Corbett, both Idaho Springs, Colo., owners; claim 1500x150 feet; situated on Spanish Bar, Spanish Bar Mining district, one mile and a half from Idaho Springs; located July 25, 1882; vein a fissure, with a crevice four feet wide, cantaining an ore of argentiferous galena and copper pyrites, carrying gold and silver, which assays from $20 to $140 per ton, with a gangue-matter of quartz; developed by a shaft twenty-two feet in depth.

**Night Hawk.**—J. E. Dubois and Michael Doyle, both Dumont, Colo., owners; claim 1500x150 feet; situated on Columbian Mountain, Montana Mining district, two miles from Dumont; vein a fissure, with a crevice six feet in width, and a pay streak three inches of galena and copper pyrites, carrying gold and silver, with a gangue of quartz; developed by a shaft forty feet in depth.

**Nil Desperandum Group.**—R. O. Old, Georgetown, Colo., owner; group comprises eight patented claims, 1500x150 feet each; situated on Columbian Mountain, Montana Mining district, at Lawson; veins all fissures, with crevices from three to five feet in width, and pay streaks from two to eight inches of galena and iron pyrites in a quartz gangue, which mill-runs, when sorted, forty ounces silver per ton; developed by shafts aggregating 243 feet and levels aggregating 408 feet; output $10,000; in connection with which there are two mill sites, situated on Silver Brook, at Lawson.

**North-east Stevens Mining Company.**—Incorporated May 28, 1878, under the Companies' Act of 1862, Great Britain; capital stock £250,000, in 25,000 shares of £10 each; president, Sir George R. Prescott, London, Eng.; secretary, William Morgan Brown, London, Eng.; Colorado agent, H. M. Griffin, lock-box 158, Georgetown, Colo.; owns the following claims: Stevens, Columbus, Col. Hill, Dividend, 1500x150 feet each, and two mill sites, five acres each; situated on McClelland Mountain, Argentine Mining district, ten miles from Georgetown; veins all fissures, containing a high-grade silver ore and a gangue-matter of quartz; developments—the Lindell Tunnel 200 feet in length, with 325 feet of drifts running therefrom, the upper workings consisting of 160 feet of shafting and 200 additional feet of drifts.

**North Hampton and Juniata.**—Thomas Weaver, Georgetown, Colo., owner; claims 1500x150 feet each; situated on west slope of Kelso Mountain, Argentine Mining district, ten miles from Georgetown; located in 1866; vein a fissure, with a crevice four feet wide containing quartz and galena, which assays seventy-five ounces silver per ton; developed by two adits 60 and 180 feet in length, respectively.

**North River.**—Wm. F. Doherty and Thomas Harris, both Idaho Springs, Colo., owners; claim 1500x150 feet; situated in Gillson Gulch, Idaho Mining district, three miles from Idaho Springs; located in 1865; vein a fissure, with a crevice four feet wide, and a pay streak eight inches of iron and copper pyrites, carrying gold, which assays from $40 to $70 per ton, with a gangue-matter of quartz; developed by a shaft thirty feet in depth.

**North-west Group.**—Seven claims, 1500x300 feet each, viz.: North-west, Garden City, Apple Rose, Old Judge, Wild Cat, Manitou, and Wild Goose; located in June, 1880; situated on Irwin's Peak, Argentine district, eleven miles from Georgetown; owners—Thos. Howard and John O'Connel, both Chihuhua, and Morris and John H. Duncan, both Georgetown; veins all fissures from two to twenty feet wide; pay streaks from two to thirty inches of galena, gray and yellow copper, antimonial silver, and black sulphurets in a quartz gangue, which mill-runs, when sorted, ten per cent copper, and from 100 to 250 ounces silver per ton; developed by seven drifts, ranging from fifteen to ninety feet in length, two levels forty-five and eighty feet long, respectively, and one cross-cut sixty feet long, designed to cut all the above veins.



**Nyanza.**—(See Nianza Mining Company.)

**O. K.**—1500x50 feet; situated on Leavenworth Mountain, about two miles from Georgetown, Griffith district; located in 1865, and patented; vein a fissure, with a crevice thirty inches wide, and a pay streak from three to nine inches of galena and sulphurets in a quartz gangue, milling, when sorted, from $100 to $500 per ton; developments consisting of one main shaft about 300 feet deep, with considerable levels and tunneling, the property having had a large output, and is making regular shipments of ore.

**O. K.**—C. E. Worth, M. J. McKinley, P. Morris, and P. Maroney, all Idaho Springs, Colo., owners claim; 1500x150 feet; situated in Spring Gulch, Jackson Mining district, one and one-half miles from Idaho Springs; located in 1882; vein a fissure, with a crevice six feet wide, and a pay streak six inches of argentiferous galena and gray copper in a quartz gangue, which assays 110 ounces silver per ton; developed by a tunnel fifty feet in length on the vein.

**October.**—W. H. Doe, Idaho Springs, Colo., owner; claim 1500x150 feet; situated in Spring Gulch, Coral Mining district, two miles from Idaho Springs; located in October, 1882; vein a fissure, with a crevice four feet wide, and a pay streak from ten to twelve inches of copper and iron pyrites and gray copper, which assays ten per cent copper, one-half ounce gold, and sixteen ounces silver per ton, with a gangue-matter of quartz; developed by a shaft seventy-five feet in depth.

**Olathe Gold and Silver Mining Company (The.)**—Incorporated under the laws of Great Britain; capital stock £150,000, in 150,000 shares of £1 each; president, T. Eyre Foakes; secretary, Henry Kendrick—both London, Eng.; superintendent, Theodore H. Lowe, Idaho Springs, Colo.; offices No. 8 Takenhouse Yard, London, Eng., and Idaho Springs, Colo.; owns the Virginia lode, 1500x150 feet; situated on Seaton Mountain, Idaho Mining district; located in 1875, and in process of patent; vein a fissure, with a crevice seven feet wide, and a pay streak eighteen inches of argentiferous galena in a quartz gangue, which mills, when sorted, $59 net per ton; developed by one main shaft forty feet in depth; worked by a thirty-horse-power engine.

**Ohio Comet Silver Mining Company (The).**—Incorporated in 1876; capital stock $200,000; offices Georgetown, Colo., and Circleville, Ohio; owns the Comet, a patented property 1500x50 feet; situated on Griffith Mountain, Griffith district; vein a wide and well defined fissure, containing galena, iron and copper pyrites, with zinc blende, in a gangue-matter of quartz, milling, when sorted, from $50 to $200 per ton; the developments consisting of the Comet Tunnel, 1,208 feet long, cutting the vein at great depth, on which there is considerable drifting and surface-working.

**Old Settler.**—J. E. Dubois, Edward Bowdon, and Thomas Pearce, all Dumont, Colo., owners; claim 1500x150 feet; situated at the head of Turkey Run, Bonner and Trail Run Mining districts; located in 1876, and patented in 1880; vein a fissure, with a crevice three and one-half feet in width, and a pay streak from six inches to three feet of galena and copper pyrites in a quartz gangue, which mills, when sorted, $156 per ton; developed by one shaft 300 feet in depth.

**Osbiston Mill.**—Leased to the Kohinoor & Donaldson Consolidated Mining Company; works situated at Clear Creek, near Fall River; building (frame) contains fifteen Stamps, with a capacity to treat fifty tons of ore in twenty-four hour.

**Oswego.**—J. Dreifurst, W. Ebert, Benj. Werner, and John Bernhardt, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Brown Mountain, Queen Mining district; located 1872; vein a fissure, with a pay streak six inches wide composed of galena, with a quartz gangue, which assays from 40 to 200 ounces silver per ton; developed by an adit forty-eight feet in length.

**Owasco.**—Clarence K. Colvin, Idaho Springs, Colo., and Hiram Merrick, Georgetown, Colo., owners; claim 1500x50 feet; situated on Brown Mountain, Queen Mining district, five miles from Georgetown; located 1872; vein a fissure, with a crevice four feet wide, and a pay streak one-half inch of silver sulphurets, with a gangue of quartz, which mills, when sorted, 1,400 ounces silver per ton; developed by shafts aggregating 360 feet in depth and adits on the vein 900 feet in length; output $50,000.

**Pacific Mining and Reducing Company.**—Incorporated under the laws of California in 1882; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, Charles McLaughlin; vice-president, A. D. Sharon; secretary and treasurer, James W. Burling—all San Francisco, Cal.; general manager, John Campbell, New York City; superintendent, F. F. Osbiston, Idaho Springs, Colo.; offices 413 California street, San Francisco, and Idaho Springs, Colo.; owns a smelting-works, situated at Idaho Springs, containing one Campbell Furnace, one Dodge Pulverizer, etc., motive power for which is supplied by two fifty-horse-power engines, with a capacity to treat forty tons per day (twenty-four hours).

**Par.**—Richard P. Chinn, Kansas, owner; claim 1500x150 feet; situated on Wall Street Mountain, Montana Mining district, two miles from Dumont; located 1879; vein a fissure, with a crevice four feet in width, containing galena and gray copper, which assays from 10 to 240 ounces silver per ton, with a gangue-matter of quartz; developed by shaft nineteen feet in depth.

**Pay Rock Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, January 12, 1875; capital stock $350,000, in 3,500 shares of $100 each; offices Georgetown; owns the Pay Rock, 1500x50 feet; situated on Republican Mountain, about two miles from Georgetown, Griffith Mining district; located 1871, and patented; vein a fissure, with a crevice from four to ten feet wide, and a pay streak from one to twenty inches, milling, when sorted from the gangue-matter, from 75 to 500 ounces of silver per ton; the property being well developed, work having been pushed successfully within the past two years, the Silver Bank level turning out ore in large quantities and of a good grade, from which an upraise of ninety feet has been run, securing good ventilation; the Egan level and the Pay Rock tunnel both also showing well.

**Pelican and Dives Mining Company (The).**—Incorporated under the laws of New York; capital stock $5,000,000, in 50,000 shares of $10 each, non-assessable; president, Norvin Green; first vice-president, Theo. V. Vail; second vice-president, A. W. Meinfield; secretary, Geo. C. Wilde; treasurer, R. H. Rochester—all New York City; superintendent, W. A. Duff, Georgetown; offices Georgetown, Colo., and 197 Broadway, New York City; owns the Pelican, Dives, Unicorn, Zillah, Bertha, and Eagle Bird lodes, all patented, and situated on Sherman Mountain, Griffith Mining district, three miles from Georgetown; veins all fissures, with crevices from three to fifteen feet in width, containing a vein-matter and gangue of quartz, and an ore of galena and gray copper, with zinc blende, which mill-runs, when sorted, from 100 to 175 ounces silver per ton; developments consisting of 2,000 feet of shafts, 500 feet of winzes, 1,380 feet of tunnels, and 5,000 feet of drifts, with a large amount of stoping, worked by an eighty-horse-power engine, with pumps, etc.; output $3,500,000, and the property is in good condition for future working.



**Peoster.**—Owners Wm. F. Doherty and Thomas B. Harris, both Idaho Springs, Colo.; claim 1500x150 feet; situated in Gillson Gulch, Idaho Mining district, three miles from Idaho Springs; located in 1865; vein a fissure, with a crevice five feet wide containing galena in a quartz gangue, which assays seventy ounces silver per ton; developed by a shaft seventy feet in depth.

**Philips.**—Owners Thomas H. Potter, Central City, J. J. Joslin, Denver, and Ezra T. Carr, Russell Gulch, Colo.; claim 1500x150 feet; situated in Virginia Cañon, three miles from Central City; located in 1859, and patented in 1882; vein a fissure, with a crevice three feet wide containing quartz and iron pyrites carrying gold; developed by a tunnel 200 feet in length and a drift 150 feet.

**Phœnix-Maine.**—3000x150 feet; situated on the Brown's Gulch slope of Sherman Mountain, near Brownsville, and about three miles from Georgetown; vein a fissure five feet wide, with a pay streak from one to six inches, which mill-runs, when sorted from the gangue-rock, from $100 to $1,000 per ton; developed by eight shafts aggregating about 400 feet in depth and levels aggregating about 800 feet; but the property has been idle of late.

**Pioneer.**—Owners D. J. Ball, Empire, Colo., and R. E. Rombeaur, St. Louis, Mo.; claim 1500x150 feet; situated at North Empire, Upper Union Mining district; patented in 1877; vein a fissure, with a crevice from four to eight feet in width, and a pay streak from ten inches to three feet of iron and copper pyrites carrying gold, in a quartz gangue, which mill-runs, when sorted, $100 per cord; developed by a tunnel 137 feet in length, which cuts the vein at a depth of seventy feet from the surface, a shaft on the vein 130 feet in depth from the tunnel-level, making it a depth of 200 feet from the surface, and drifts aggregating 150 feet.

**Pioneer Mill.**—Owners D. J. Ball, Empire, Colo., and R. E. Rombeaur, St. Louis, Mo.; building 60x30 feet in size, situated at North Empire, and containing ten Stamps, with a capacity for treating fifteen tons of ore in twenty-four hours; worked by a forty-horse-power engine.

**Pittsburgh.**—Owners D. J. Ball, Empire, and Chas. R. Fish, Georgetown, Colo.; claim 1300x150 feet; situated at North Empire, Upper Union Mining district; patented in 1875; vein a fissure, with a crevice from eight to fifteen feet in width, and a pay streak from two to four feet of iron and copper pyrites carrying gold, which mill-runs, when sorted from the gangue-matter, two and one-half ounces gold and five ounces silver per cord; vein is cut by the Bay State Tunnel at a depth of 151 feet, and is otherwise developed by two drifts on the vein 200 feet long.

**Pleasant Hill.**—Ed. C. Guibor, Denver, L. J. Harrington and H. M. Cline, both Empire, Colo., owners; claim 1500x150 feet; situated on the south slope of Russell Mountain, nine miles from Empire, Atlantic Mining district; located June, 1879; vein a fissure, twenty-eight inches wide, of quartz carrying silver glance, which mills, when sorted, from 100 to 150 ounces silver per ton; developed by two shafts eighteen and twenty feet in depth, respectively, and one tunnel forty feet long.

**Plebian.**—J. Warren Brown, New York City, Thos. Williams, Denver, and George Densmore, Georgetown, owners; claim 3000x50 feet; situated on the south slope of Columbia Mountain, one and one-half miles from Georgetown, Griffith Mining district; located in 1869, and patented in 1872; vein a fissure ten feet wide, pay streak from one to six inches of galena in a quartz gangue, which mills, when sorted, from 100 to 500 ounces silver per ton; developed by two shafts seventy-five and sixty feet in depth, respectively, and 200 feet of drifting.

**Plumper.**—Ezra Paulson, Silver Plume, Colo., owner; claim 1500x 150 feet; situated on Leavenworth Mountain, Argentine Mining district, four miles from Georgetown, Colo.; located in 1880; vein a fissure, with a crevice three feet wide, and a pay streak six inches of galena in a quartz gangue, which assays from 50 to 300 ounces silver per ton; developed by a tunnel twenty-nine feet in length and a shaft forty-three feet in depth.

**Pocahontas.**—Wm. B. Hood, Georgetown, Colo., owner; claim 1500 x150 feet; situated on Democrat Mountain, Griffith Mining district, at Georgetown; located in 1879; vein a fissure, with a crevice twenty-five feet wide, and a pay streak from four to twelve inches of galena in a quartz gangue, which assays eighty-one ounces silver per ton; developed by a tunnel 110 feet in length.

**Polar Star Extension East.**—Albert Ford, F. B. Farrington, E. H. Harrison, and J. K. Linscott, all Georgetown, Colo., owners; claim 1500 x150 feet; situated on Democrat Mountain, Griffith Mining district, two and one-half miles from Georgetown; vein a fissure, with a pay streak four inches wide of galena in a quartz gangue, which mill-runs, when sorted, $260 per ton; developed by six shafts aggregating 400 feet in depth and drifts aggregating 600 feet in length; output $230,000.

**Polar Star Silver Mining Company (The).**—Incorporated under the laws of New York, in April, 1877; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, R. W. Donnell; general manager, Henry Fulton; offices New York City and Georgetown, Colo.; owns the Polar Star lode, 1300x50 feet; located in 1866, and patented; situated on Democrat Mountain, Griffith Mining district, two miles from Georgetown; vein a vertical fissure, from ten to twenty feet in width, pay vein from one to eighteen inches of galena and zinc blende in a quartz gangue, which mill-runs, when sorted, 200 ounces silver per ton; developments—three shafts aggregating 900 feet in depth, three tunnels aggregating 2,400 feet in length, and four levels aggregating 600 feet.

**Pride of the West.**—Thomas Lloyd, Silver Creek, Colo., and Thomas Parish, Colorado Springs, Colo., owners; claim 1500x150 feet; situated in Silver Creek and on Columbian Mountain, Montana Mining district; located in 1880, and patented in 1882; vein a fissure, with a crevice six feet in width, and a pay streak from four to eight inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, 150 ounces silver per ton; developed by a tunnel 320 feet in length, a shaft from the tunnel 130 feet in depth, and two drifts aggregating 150 feet; output for 1882 $9,000.

**Pulaski Silver Mining Company (The).**—Office Washington Court-house, Ohio; owns the Pulaski lode, 2100x150 feet; located in 1874, and patented; situated in Griffith Mining district, two miles from Georgetown; vein a vertical fissure, twenty feet in width; ore—argentiferous galena and free gold in a gangue-matter of quartz, which mill-runs, when sorted, $10 per ton; developments—two tunnels 100 and 1,100 feet in length, respectively.



**Queen of the Ranch and Lansingberg.**—Owners L. and S. Sternberger, 503 Market street, Philadelphia, Pa.; claims 1500x150 feet each; situated at Camp Clifford, York Mining district, two miles from Central City; located in August and September, 1881; veins both fissures, with crevices two and three feet in width, respectively, with small pay streaks of galena, gray copper, and sulphurets in a quartz gangue; the former developed by a shaft 100 feet in depth, and the latter by a shaft 120 feet in depth, and a drift thirty feet in length.

**Queen of the West.**—(See Burlington and Colorado Silver Mining Company.)

**R. B. Hayes Group.**—Comprising the R. B. Hayes, Democrat, and Black Swan; Thos. B. Bryan, Idaho Springs, Colo., owner; claims 1500x150 feet each; situated in Chicago Gulch, Coral Mining district, one and one-half miles from Idaho Springs; located in 1879, and the R. B. Hayes entered for patent; veins all fissures, with crevices varying from three to five feet in width, and pay streaks from three to six inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 200 to 300 ounces silver per ton; R. B. Hayes developed by a shaft fifty feet in depth, and 100 feet of levels, and the others by assessment work.

**Ralpha Leta Group.**—Consisting of Ralpha Leta, Mamie, White Quail, Wooton, Cross-cut, Silver Glance, Ora Bell, and Snow-drift lodes; owners William F. Kelso, Denver, Colo., and I. P. Davie, Galveston, Texas; claims 1500x150 feet each; situated on west slope of Kelso Mountain, Argentine Mining district; located in 1880; veins all fissures, varying in width from four to eight feet, and containing argentiferous galena, gray copper, and sulphurets of silver, which mill-runs, when sorted, from 50 to 400 ounces silver per ton, with a gangue-matter of quartz; developed by the United Tunnel.

**Range Line.**—J. E. Dubois and John Donnelly, both Dumont, Colo., owners; claim 1500x150 feet; situated on Capital Mountain, Montana Mining district, one mile from Dumont; located in 1880; vein a fissure, with a crevice three feet in width, and a pay streak from eight to sixteen inches of gray and yellow copper and galena, in a quartz gangue; assays $90 per ton; developed by a shaft sixty feet in depth and a drift forty feet in length.

**Rattler and Rattler Extension.**—E. A. Lynn, William Lynn, W. M. Jones, and B. F. Pease, all Central City, Colo., owners; claims 1500 x150 feet each; situated on Mt. Pisga, in Lincoln Mining district, three and a half miles from Central City; located in 1878; vein a fissure, with a crevice three feet in width, containing galena carrying gold and silver, which assays six ounces gold and from 50 to 500 ounces silver per ton, with a gangue-matter of quartz; developed by shaft forty-two feet in depth.

**Red Cliff.**—J. L. Sanders, Bakerville, owner; claim 1500x150 feet; situated on Grizzley Mountain, West Argentine Mining district, eleven miles from Georgetown; vein a fissure four and a half feet wide, pay streak two inches of argentiferous galena in a quartz gangue, which assays thirty-five per cent lead and sixty ounces silver per ton; developed by a tunnel thirty-three feet in length.

**Red Elephant No. 1.**—Nathan S. Crane and Philip Robinson, both Dumont, Colo., owners; claim 1500x150 feet; situated on Red Elephant Mountain, Downeiville Mining district, one mile from Dumont; located in 1873; vein a fissure, with a crevice from three to five feet in width, containing pockets of argentiferous galena, which mill-runs, when sorted, ninety-three ounces silver per ton; developed by a shaft seventy feet in depth, a tunnel 100 feet in length, and a drift thirty-five feet in length.

**Red Elephant Mining Company (The).**—Incorporated under the laws of Colorado, January, 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Frank Rudd; secretary, F. B. Gilbert—both New York City; superintendent, Chas. E. Bigelow, Georgetown, Colo.; offices 102 Broadway, New York City, and Georgetown, Colo.; owns the White, White Extension, Boulder Nest, and Free America lodes—Boulder Nest lode 1100x150 feet, White and White Extension contain 1650x150 feet, and Free America 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, three-fourths mile from Lawson; White, White Extension, and Boulder Nest patented; veins all fissures, with crevices from eight to seventy feet in width, and pay streaks from two to twenty-four inches, containing argentiferous galena, gray copper, native silver, and sulphurets in a quartz gangue, which mill-runs, when sorted, from $50 to $200 per ton; White developed by a shaft 450 feet in depth and levels 1,200 feet in length; Boulder Nest by one main shaft 520 feet in depth, other shafts aggregating 800 feet, and eight levels averaging 300 feet in length each; Free America by one main shaft 540 feet in depth and eight levels averaging 300 feet in length each; worked by three engines, two of forty-horse-power and one of twenty-horse-power; output $950,000, and the property is now producing $10,000 per month; 150 feet on the west end of the White, and to a depth of eighty feet, is leased to R. C. Light and Walter McCrea, both Lawson, Colo.; 185 feet adjoining also on the White is leased to Van Syckle & Gordon, Lawson, Colo.; 405 feet, to a depth of 350 feet, still on the White and adjoining the Van Syckle & Gordon section, and 300 feet on the Boulder Nest, to a depth of seventy feet, is leased to Loring & Co.; 350 feet, to a depth of sixty feet, on the Boulder Nest and adjoining the last mentioned, is leased to Thos. Walsh, P. White, and Lawrence Hanley, of Lawson.

**Republican Mountain Silver Mines Company.**—(*Limited*); incorporated under the laws of Great Britain in 1880; capital stock £150,000, in 30,000 shares of £5 each; chairman, T. Eyre Foakes; directors, T. Eyre Foakes, Norman Fronson, both London, England, and J. Warren Brown, New York City; secretary, E. F. Tremayne, London, England; offices 31 Lombard street, London, England, and 62 Broadway, New York City; owns the South America, 1500x150 feet, Edward Everett, Edinboro, Rock, Mountain Mammoth, Fenian, Peru, Barbara, Allen, and Dryden, 1400x150 feet each, and Morning Star, 800x150 feet; situated on Republican Mountain, Griffith Mining district, near Georgetown; all patented, with exception of the Peru, Barbara, Allen, and Dryden; veins all fissures, from four to eight feet in width, containing argentiferous galena in a quartz gangue, which mill-runs, when sorted, from 30 to 100 ounces silver per ton; the Edward Everett developed by two shafts 130 and 80 feet in depth, respectively, and two levels 100 feet in length each; South America by an adit 100 feet on the vein and a cross-cut tunnel to cut the vein, now driven 200 feet; Morning Star by two shafts 40 and 236 feet in depth, respectively, and levels aggregating 236 feet; and the Everett Tunnel is now run 700 feet, and having intersected the Morning Star lode, and will cut the Edward Everett at a distance of 900 feet more.

**Rescue and Willamette.**—J. A. Van Auken and Donald Ross, both Red Elephant, Colo., and M. L. Jennings, Michigan, owners; claims 1500 x150 feet each; situated on Red Elephant Mountain, Downieville Mining district; located in 1882; veins both fissures, with a crevice in the Rescue thirty-five feet in width, with an ore in both claims of argentiferous galena in a quartz gangue, which assays fifty per cent lead and forty-eight ounces silver per ton; Rescue developed by a shaft forty feet in depth, and Willamette by a shaft twenty feet in depth.

**Richmond.**—Thomas Woodley, Wm. Mathews, and George Reynolds, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Saxon Mountain, Griffith Mining district, one and one-half miles from Georgetown; located in 1882; vein a fissure, with a crevice from ten to twelve feet wide, and a pay streak from two to six inches of galena and gray copper in a quartz gangue, which assays from $30 to $50 per ton; developed by two tunnels 30 and 100 feet in length, respectively.



**Rob Roy Group.**—James Haggart, Brownville, Colo., owner; group embraces five patented claims, 1500x150 feet each; situated on Hanna and Brown Mountains, Griffith and Queen Mining districts; veins all fissures, with crevices from four to six feet wide, and pay streaks from one to ten inches of galena and gray copper in a quartz gangue, which assays from 50 to 150 ounces silver per ton; developed by a tunnel 130 feet in length.

**Robert E. Lee.**—G. J. Hite, Jacob Fillins, and Robert Morrison, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Saxon Mountain, Montana Mining district, four miles from Georgetown; located in 1880; vein a contact, with a crevice eight feet wide carrying carbonates, which assay from $30 to $100 per ton; developed by a shaft 140 feet in depth.

**Rocky Mountain Group.**—M. H. Neville and W. B. McClain, both Georgetown, Colo., owners; four claims, 1500x150 feet each; situated on Leavenworth Mountain, Griffith Mining district, one mile from Georgetown; located in 1865; veins all fissures, with crevices from four to six feet in width, containing quartz and galena, which mill-runs, when sorted, from 25 to 300 ounces silver per ton; developed by a tunnel 684 feet in length which intersects all four lodes.

**Rocky Mountain Prospecting Company.**—Incorporated under the laws of Colorado, in 1875; owns the Galena lode, 1500x150 feet; situated on Democrat Mountain, Griffith Mining district, near Georgetown; located in 1875, and patented; vein a fissure, containing from six to eighteen inches of galena in a quartz gangue, which mill-runs, when sorted, thirty per cent lead and forty ounces silver per ton.

**Roe East.**—(See Seven-Thirty Group.)

**Rogers.**—Owned by John Coburn, Lawson, Colo.; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, at Lawson; located in 1882; vein a fissure, with a crevice three and one-half feet in width, and a pay streak three inches of argentiferous galena in a quartz gangue, which assays 125 ounces silver per ton; developed by a shaft twenty feet in depth.

**Saginaw Valley Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $500,000, in 10,000 shares of $50 each, non-assessable; president, L. T. Durand; secretary, J. Tuttle; treasurer, J. A. Weaver—all East Saginaw, Mich.; general manager, E. W. Lyon, Dumont, Colo.; offices Genesee Avenue, East Saginaw, Mich., and Dumont, Colo.; owns the Lorroway, Rosa, and Tim Tarsney lodes, 1500x150 feet each; situated on Hiawatha and Caledonia Hills, Morris Mining district, three-fourths of a mile from Dumont; located in 1880 and 1882, and Lorroway and Rosa patented in 1882; veins all fissures, with crevices varying from five to twelve feet in width, and pay streaks about five inches of iron and copper pyrites and galena, carrying gold and silver, which assays $100 per ton in gold and silver, with a gangue of quartz; developed by a shaft 150 feet in depth and levels aggregating 150 feet.

**Samson.**—Owners Wm. Coonrad and Henry Gambler, both Camp Clifford; claim 1500x150 feet; situated at Camp Clifford, York Mining dis-

trict, three miles from Central City; located in 1879; vein a fissure, with a crevice from fifteen to eighteen inches wide, and a pay streak from six to eight inches of gray copper, ruby silver, and galena in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by a shaft 100 feet in depth.

**Savage.**—Owners Wm. F. Doherty and Thos. B. Harris, both Idaho Springs, Colo.; claim 1500x150 feet; situated three miles from Idaho Springs, Grass Valley and Ohio Mining districts; located in 1879; vein a fissure, with a crevice five feet wide, and a pay streak eighteen inches of iron and copper pyrites carrying gold, which assays from $3 to $138 per ton, with a gangue-matter of quartz; developed by an adit on the vein seventy feet in length.

**Scott.**—Owners James Burrell and Daniel Hansen, Central City, Colo.; claim 1500x150 feet; situated on the same vein and possessing similar characteristics to the Dunedin.

**Sellon Mining Company (The).**—Incorporated under the laws of Great Britain; general manager, H. B. Grose, Alma, Colo.; office Alma; owns the following claims: Sellon, Halten, Garden, and Plutus, 1500x150 feet each; situated on Chicago Creek, Ottawa Mining district, four miles from Georgetown, Colo.; located 1881; vein a fissure, with a crevice from two to four feet wide, containing seams of gold and silver ore; developed by three shafts fifty feet in depth each, and three drifts, twenty, forty, and sixty feet in length, respectively.

**Seven-Thirty Group.**—Comprising the East Roe, Seven-Thirty, Hercules, West Hercules, and eight other patented lodes, and the Hercules Tunnel site; H. M. Griffin, Georgetown, Colo., owner; claims embrace about one mile linear measurement on the principal vein, and are situated in Brown's Gulch, Griffith Mining district, near Brownville, and four miles north of Georgetown; vein a fissure, from ten to twenty-five feet wide, containing a vein-matter of quartz and a high-grade silver ore, which mill-runs, when sorted, as follows: first-class 1,000 ounces silver per ton, second-class 400 ounces, third-class 150 ounces; developments—1,500 feet of adits, exposing the vein, over 6,000 feet of drifts, and several hundred feet of shafting and winzes; output $500,000.

**Siberian Group.**—Comprising the Siberian, Romeo, and Galtin; M. H. Neville, H. B. McClain, and J. Gilchrist, all Georgetown, Colo., owners; claims 1500x150 feet each; situated on Saxon Mountain, East Argentine Mining district, one mile from Georgetown; located from 1876 to 1881; veins all fissures, with crevices from four to six feet wide of quartz seamed with galena, which mill-runs, when sorted, thirty per cent lead and twenty-four ounces silver per ton; developed by two tunnels 70 and 210 feet in length, respectively.

**Silver Bell.**—T. M. Chinn, Dumont, Colo., Charles C. Welch, Golden, Colo., and C. Stevens, Idaho Springs, Colo., owners; claims 1500x150 feet; situated on Columbian Mountain, Montana Mining district, two miles from Dumont; located 1877, and patented 1879; vein a fissure, with a crevice six feet in width, containing seams of argentiferous galena and gray copper in a quartz gangue, which assays 122 ounces silver per ton; developed by a shaft forty-five feet in depth.

**Silver Cloud.**—(See Victor Silver Mining Company.)

**Silver Cloud.**—Henderson & Co., Pittsburgh, Pa., owners; claim 2000x50 feet; situated on Hanna Mountain, Queen Mining district, one mile from Brownville, Colo.; located 1868; vein a fissure, with a crevice from four



to twelve inches wide, and a pay streak from one to three inches of galena and gray copper in a quartz gangue, which assays from 100 to 1,500 ounces silver per ton; developed by two shafts 75 and 100 feet in depth, respectively.

**Silver Glance Mining Company (The).**—Incorported under the laws of Colorado; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, Andrew McClelland; secretary and treasurer, L. H. Sheppard; office Georgetown, Colo.; owns the Silver Glance lode, 1100x150 feet; situated on Democrat Mountain, Upper Union Mining district, three miles from Georgetown, and patented; vein a fissure, with a crevice four feet wide, and a pay streak from six to twenty-four inches of galena in a quartz gangue, which mill-runs, when sorted, from 150 to 300 ounces silver per ton; developed by two adits on the vein aggregating 800 feet and a cross-cut 350 feet long; output $150,000.

**Silver Mountain.**—Situated on Silver Mountain, Upper Union district, about two miles from the railroad; vein a fissure four feet wide, pay streak from twelve to twenty-four inches of iron and copper pyrites in a quartz gangue, milling, when sorted, about $50 per cord; developments consist of a shaft 135 feet deep and a tunnel cutting the vein 135 feet deep, on which there is some drifting.

**Silver Medal.**—John Malann, Wm. K. Horner, and E. C. Mosneer, all Central City, owners; claim 1500x150 feet; situated at Fall River, Lincoln Mining district, six miles from Central City; vein a fissure, with a crevice three feet wide, and a pay streak ten inches of galena and oxide of lead in a quartz gangue, which assays 170 ounces silver per ton; developed by a shaft twenty-five feet in depth.

**Silver Ore.**—A. Dickenson, Charles Vance, John Townsend, Pope Reed, and Charles King, all Georgetown, Colo., owners; claim 1500x150 feet; situated in East Argentine Mining district, nine miles from Georgetown; located in 1880; vein a fissure, with a crevice four feet wide, containing quartz and galena, which assays ninety bunces silver per ton; developed by an adit thirty feet in length.

**Silver Plume Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, James Long; general manager, L. N. Foster, Georgetown, Colo.; offices Georgetown, Colo., and Philadelphia, Pa.; owns the Silver Plume and three other claims, 1500x150 feet each; situated on Republican Mountain, Griffith Mining district, three of which are patented; veins all fissures, with crevices from three to twenty feet in width, and pay streaks from one to eighteen inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, as high as 500 ounces silver per ton; developed by ten tunnels aggregating 4,000 feet; output $500,000.

**Silver Plume Sampling Works.**—Billings & Co., Silver Plume, Colo., owners; R. L. Hornbrook, superintendent; building 45x10 feet; situated at Silver Plume; containing Dodge and Blake Crushers, Cornish Rolls, motive power for the same being supplied by a forty-horse-power engine, and has a capacity for sampling 250 tons per month; built by Fraser & Chalmers, Chicago, Ill.

**Silver Queen.**—William Owen and Theodore H. Lowe, both Idaho Springs, Colo., and J. H. Stephens and Dr. Bancroft, both Denver, Colo., owners; claim 1500x50 feet; situated on Seaton Mountain, Idaho Mining district, one

mile and a half from Idaho Springs; located in 1878, and in process of patent; vein a fissure, with a crevice from three and a half to five feet wide, and a pay streak from eight to fourteen inches of sulphides of zinc, lead, and copper, in a quartz gangue, which mill-runs, when sorted, $77.20 net per ton; developed by a shaft twenty feet deep, a cross-cut eighty feet long, and an adit on vein seventy-four feet long; output for 1882, $1,500.

**Silver Question, Spartan Chief, and St. Julian.**—J. G. Kennedy & Co., Silver Plume, Colo., owners; Silver Question and Spartan Chief 1500x150 feet, and St. Julian 1200x150 feet; situated on Sherman and Brown Mountains, in Griffith and Queen Mining districts, three and a half miles from Georgetown; located in 1880, and patented; veins all fissures, with crevices from four to six feet in width, and pay streaks from eight to twelve inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, 150 ounces silver per ton; developed by a cross-cut tunnel 160 feet in length and sixty feet of shafting.

**Silver Wreath.**—Peter Youst, Georgetown, Colo., owner; claim 1500x150 feet; situated on Irwin Peak, West Argentine Mining district, five miles from Bakerville, and eleven miles from Georgetown; located in 1881; vein a fissure, with a crevice five feet wide, and a pay streak from eight to twelve inches of galena and copper in a quartz gangue, which assays sixty per cent lead and from twenty to forty ounces silver per ton; developed by one main tunnel thirty feet in length.

**Slide.**—F. P. Rosengarten, Peter Youst, C. Bull, and James DuBois, all Jamestown, Colo., owners; claim 1500x150 feet; situated on Irwin's Peak, five miles from Bakerville; located in 1880; vein a fissure, from one to three feet in width, carrying quartz and galena, which assays thirty per cent lead and from twenty to fifty ounces silver per ton; developed by two adits thirty and fifty feet in length, respectively.

**Snow-drift.**—(See Brooklyn Consolidated Mining Company.)

**Spartan Chief.**—(See Silver Question.)

**Specie Payment Extension.**—Owner J. J. Elliott, Idaho Springs, Colo.; claim 1500x150 feet; situated on Bellevue Mountain, Virginia Mining district, four and one-half miles from Idaho Springs; located in 1878, and patented in 1880; vein a fissure, with a crevice eight feet wide, and a pay streak eighteen inches of gold-bearing quartz, which assays $180 per ton; developed by a shaft sixty feet deep and an open cut.

**Springfield Gold and Silver Mining Company (The).**—Incorporated under the laws of Ohio and Colorado, October, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; paid-up capital $160,000; president, J. S. Crowell; vice-president, John Foos; secretary and treasurer, C. D. Hank—all Springfield, Ohio; superintendent, T. A. Perkins, Idaho Springs, Colo.; office Idaho Springs; owns the following lodes, viz.: Lady Elgin, Cosmopolitan, S. P. Remington, Crowell, and Springfield, 1500x150 feet each, except Lady Elgin, which is 1330x115, and Cosmopolitan 1440x150 feet; all situated in Virginia Cañon, Idaho Mining district; located from 1880 to 1883, and S. P. Remington patented in 1881; veins all fissures, with crevices varying from three and one-half to eight feet in width, and pay streaks from three to eight inches, with about two feet of a concentrating-product; nature of ore—iron pyrites carrying gold with a gangue-matter of quartz, which mill-runs, when sorted, $58.20 gross per ton, and concentrates yield about $65 gross per ton; Lady Elgin developed by thirty feet of shafts



and 250 feet of adits on vein, Cosmopolitan by shafts aggregating 130 feet, and an adit sixty-five feet long, S. P. Remington by 149 feet of shafts, Springfield by a shaft forty feet deep.

**Springfield Silver Mining Company (The).**—Incorporated under the laws of Illinois; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, Geo. Van Duyn; secretary and treasurer, Geo. M. Brinkerhoff—both Springfield, Ill.; offices Springfield, Ill., and Empire, Colo.; owns the Snowy Range lode, 1500x150 feet; situated on Russell Mountain, Atlantic Mining district; patented in 1880; vein a fissure, with a crevice four feet wide, and a pay streak from ten to twenty-four inches of argentiferous galena in a quartz gangue, which assays 150 ounces silver per ton; developed by a shaft eighty feet in depth and a cross-cut twenty-seven feet in length.

**St. Julian.**—(See Silver Question.)

**St. Peters.**—Silas Hanchett and John Dreit, both Empire, Colo., owners; claim 1500x150 feet; situated on Breckenridge Mountain, Upper Union Mining district; located in 1881; vein a fissure, with a crevice four feet wide, containing argentiferous galena in a quartz gangue, which assays from 50 to 200 ounces silver per ton; developed by a tunnel 100 feet in length.

**Stalwart.**—R. O. Old, Thomas Barnes, and others, Georgetown, Colo., owners; claim 1500x150 feet; situated on Anglo-Saxon Mountain, Griffith Mining district; located in 1879; vein a fissure, with a crevice ten feet wide, containing quartz and galena, which assays 125 ounces silver per ton; developed by a shaft 20 feet in depth and drifts aggregating 250 feet.

**Standard.**—H. F. Obrist, J. J. Harvast, and R. S. Morrison, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Leavenworth Mountain, Griffith Mining district; located in 1880, and patented; vein a fissure, with a crevice thirty feet wide, through which is scattered galena and gray copper, assaying from 300 to 600 ounces silver per ton; developed by a tunnel 200 feet in length.

**Star of the West Group.**—Consisting of Star of the West and one other claim, 1500x150 feet each; W. J. Faulkener, Wm. Hines, and Samuel Hines, all Georgetown, Colo., owners; claims situated on Sherman Mountain, Griffith Mining district, four miles from Georgetown; located in 1880; veins both fissures, with crevices five and twenty-five feet wide, respectively, containing galena in a gangue-matterof quartz, which assays fifty ounces silver per ton; developed by three tunnels, fifty, fifty-five, and seventy-five feet in length, respectively.

**Star Mill.**—Owned by the Kohinoor & Donaldson Consolidated Mining Company (limited); works situated at Idaho Springs, Colo.; building (frame) containing thirty-five Stamps and five Frue Vanners, made by Fraser & Chalmers, Chicago; capacity forty tons of ore in twenty-four hours.

**Stem-Winder Group.**—G. J. Hite & Co., Georgetown, Colo., owners; group comprises eight lode claims and two tunnel sites; situated on Columbia, Mountain one and one-half miles from Georgetown; located in 1879, and partially patented; veins all fissures, with crevices from four to ten feet in width, and pay streaks from three to fifteen inches of galena and sulphurets in a quartz gangue, which mills, when sorted, from 50 to 500 ounces silver per ton; developed by shafts aggregating 461 feet, levels 730 feet, and a cross-cut tunnel 107 feet in length.

**Stephens Mining Company (The).**—Incorporated under the laws of Ohio; president, J. B. Arnold, Pittsburgh, Pa.; secretary, J. R. Murdock, Cincinnati, Ohio; superintendent, L. H. Shepherd, Georgetown, Colo.; offices Georgetown, Colo., and Cincinnati, Ohio; owns the Stephens lode, 1500x50 feet; situated on McClelland Mountain, West Argentine Mining district, and patented; vein a fissure, with a crevice four feet wide, and a pay streak one foot of galena and gray copper in a quartz gangue, which mill-runs, when sorted, forty per cent lead and sixty ounces silver per ton; developed by one main shaft 500 feet in depth, levels aggregating 3,000 feet, and a tunnel 320 feet in length; output 16,000 tons of ore.

**Sterling Silver Mining Company (The).**—Incorporated under the laws of New Jersey; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, James Stewart; secretary, John Warman; treasurer, B. J. Woodward; superintendent, John E. Roberts; offices Georgetown, Colo., and Philadelphia, Pa.; owns the Sterling East and West lodes, 3000x50 feet; situated on Republican Mountain, Griffith Mining district, two miles from Georgetown; vein a fissure, with a crevice varying from six to ten feet in width, and a pay streak containing galena and sulphurets in a quartz gangue from one-half to five inches wide, which mill-runs, when sorted, from 100 to 400 ounces silver per ton; developed by three shafts 250 feet in depth each, two tunnels 65 and 300 feet in length, respectively; output $25,000.

**Stevens Mining Company.**—(See North-east Stevens Mining Company.)

**Summit Group.**—Comprising the Summit, Port Jervis, Precinct, Guatemala, Guatemala Extension, and Bunch lodes; R. F. Lord, J. H. Lord, and G. Crook, all Georgetown, Colo., owners; claims 1500x150 feet each; situated on Summit Mountain, Griffith Mining district; located from 1864 to 1882, and all patented, with exception of Guatemala, Guatemala Extension, and Bunch lodes, which are in process of patenting; vein a fissure, varying in width from two to twenty feet, and containing a sulphide of silver and a quartz vein-matter, the ore milling, when sorted, an average of 532 ounces silver per ton from all classes; developments—one adit on the vein 248 feet long, cross-cuts on the veins forty-two and one-half feet long, an upraise fifty two feet, a shaft 101 feet deep, and levels ninety feet long—all in pay ore.

**Summit Group.**—Consisting of the Summit, Sure Pay, Seven-Thirty, Sterling, and Morning Star; William F. Kelso, Denver, owner; claims 1500x150 feet; situated on Kelso Mountain, Argentine Mining district; located 1881; veins somewhat undefined, but probably fissures containing argentiferous galena in a gangue-matter of quartz; developments consist of assessment work.

**Sunset.**—H. C. Harrington, Leadville, and James Phelan, Georgetown, Colo., owners; claim 1500x300 feet; situated on Leavenworth Mountain, Griffith Mining district, one mile from Georgetown; located 1872, and patented August, 1882; vein a fissure, with a crevice from two to four feet wide, containing argentiferous galena in a quartz gangue-matter, which assays as high as 1,500 ounces silver per ton; developed by a shaft 110 feet in depth and a tunnel 225 feet in length.

**Swamp Angel Mining Company (The).**—Incorporated under the laws of Colorado, October 11, 1881; principals—Henry Lewis, Joseph N. Kinney, Jos. H. Rhodes, and John B. Read, all Cincinnati, Ohio, and Paschal R. Smith, Denver, Colo.; superintendent, James Collins, Central City, Colo.; office Windsor Hotel Building, Denver, Colo.; owns the Swamp Angel lode, 1500x150 feet; situated in Camp Clifford, two miles from Central City, and patented; vein a fissure, with a crevice from two and one-half to eight feet in width, containing galena, gray copper, and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by shaft 200 feet in depth and levels 225 feet in length.



**Tallahassee.**—Paul Lindstrom, Central City, Colo., owner; claim 1500x150 feet; situated in Upper Union Mining district, one-fourth mile from Empire; located 1880; vein a fissure, with a crevice four feet wide, containing argentiferous galena in a quartz gangue, which assays sixty ounces silver per ton; developed by shaft fifty feet in depth and tunnel sixty feet in length.

**Tam O'Shanter.**—James Tassey, Georgetown, Colo., owner; claim 1500x150 feet; situated on Columbia Mountain, Griffith Mining district, one and one-half miles from Georgetown; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak five inches of argentiferous galena, with a gangue-matter of quartz, which assays 400 ounces silver per ton; developed by a tunnel 110 feet in length and two shafts 25 and 32 feet in depth, respectively.

**Telephone.**—Thomas J. Cantlon and Hiram S. Merrick, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Brown Mountain, Queen Mining district, three and one-half miles from Georgetown; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak ten inches of galena and sulphurets, which mill-runs, when sorted, from 50 to 300 ounces silver per ton, in a gangue-matter of quartz; developed by adits 90 and 120 feet in length, respectively, and shafts aggregating 100 feet; output $50,000.

**Tenth Legion.**—D. J. Ball, Empire, Colo., Willard Teller, G. C. Munson, both Denver, Colo., and James Miller, Pennsylvania, owners; claim 800x150 feet; situated at North Empire, Upper Union Mining district; located in 1861, and 400 feet of the location patented in 1872; vein a fissure, with a crevice twenty feet in width, and a pay streak from eighteen inches to four feet of iron and copper pyrites carrying gold, which mill-runs three ounces gold per ton, after sorting from the quartz gangue-rock; developed by a shaft 265 feet in depth and drifts aggregating 200 feet; output $100,000.

**Terrible.**—(See Colorado United Mining Company.)

**Terrible Mill.**—Owned by the Colorado United Mining Company; situated on South Clear Creek, in Brownville, and about three miles from Georgetown; main building 85x98 feet, containing two Crushers, two Rollers, manufactured by Fraser & Chalmers, six Hartz Jigs, Screens, etc.; motive power for the same being supplied by a sixty-horse-power engine, with ample boiler capacity fifty tons per day, (twenty-four hours.)

**Tilden, Samuel J.**—(See Marshall Silver Mining Company.)

**Torpedo Group.**—Louis J. Maerki and Edward Bloom, both Georgetown, Colo., owners; group comprises the Torpedo, Eclipse, Monitor, Telephone, Condor, Panama, and T. H. Paney lodes, 1500x150 feet each; situated on the north slope of Democrat Mountain, Upper Union Mining district; located in 1878 and 1879; veins all fissures, with crevices from three to six feet in width, and pay streaks from two to six inches of galena, sulphurets, and gray copper, which assays 172 ounces silver per ton, in a quartz gangue; developed by six shafts ranging from ten to seventy feet in depth, two tunnels 120 and 150 feet in length, respectively, and seventy-five feet of drifts.

**Tropic.**—Joseph Reynolds, 165 Washington street, Chicago, Ills., and James J. Gilbert, Topeka, Kas., owners; claim 1500x150 feet; situated on Seaton Mountain, Idaho Mining district, one mile and a half from Idaho Springs; located in 1870, and patented in 1876; vein a fissure, with a crevice from three to five feet in width, and a pay streak from four inches to two feet of argentiferous galena, gray copper, and iron pyrites, carrying some gold, which mill-runs, from $50 to $200 per ton, when sorted from the quartz gangue; developed by two shafts 190 and 275 feet in depth, respectively, and drifts aggregating 3,000 feet; worked by a forty-horse-power engine; output $200,000.

**Twilight.**—Charles Vance and George M. Vance, both Georgetown, Colo., owners; claim 1500x150 feet; situated in east Argentine Mining district, nine miles from Georgetown; located in 1880; vein a fissure, with a crevice four and a half feet in width, containing seams of quartz and galena, which assays fifty ounces silver per ton; developed by a drift 85 feet in length.

**Unadilla Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $500,000, in 500,000 shares of $1 each, non-assessable; president, R. D. Harris; secretary, R. A. Young; vice-president, A. H. Allen—all New York City; general manager and superintendent, J. E. DuBoise, Dumont, Colo.; office No. 20 Exchange Place, New York City and Dumont, Colo.; owns the Eagle, 1500x150 feet; situated on Hiawatha Hill, Morris Mining district; vein a fissure, with a crevice twelve feet wide, and a pay streak from six inches to three feet of iron and copper pyrites, carrying gold and silver, which mill-runs from four to ten ounces gold per ton, when sorted from the quartz gangue-rock; developed by a shaft 225 feet in depth, a drift 350 feet in length, and winzes 150 feet in depth; worked by a twenty-five-horse-power engine; Surprise and Keith No. 3., 1500x150 feet each; situated on Keith Mountain, Morris Mining district; vein a fissure, with a pay streak ten inches wide of iron and copper pyrites and gray copper, which mill-runs 400 ounces silver per ton, when sorted from the quartz gangue-matter; developed by a shaft seventy feet in depth and a drift fifty feet in length; Ida, 1500x150 feet; situated on Capital Mountain, Montana Mining district; vein a fissure, with a crevice three feet wide, and a pay streak six inches of copper pyrites and galena, carrying gold and silver, with a gangue of quartz; developed by a shaft twenty feet in depth; Silver Rock, 1500x150 feet; situated on Columbian Mountain, Montana Mining district; vein a fissure, with a crevice four feet wide, and a pay streak ten inches of galena in a quartz gangue, which assays seventy-eight ounces silver per ton; developed by two tunnels 150 feet long each; and the Whitlock, four acres; situated near the Eagle, and developed by a cross-cut from the last named claim, 150 feet in length.

**Union.**—George W. Frank, Georgetown, Colo., owner; claim 1500x150 feet; situated on Red Elephant Mountain, Downieville Mining district, six miles from Georgetown; located in 1876, and patented; vein a fissure, with a crevice from ten to fifteen feet wide, and a pay streak from four to sixteen inches of galena in a quartz gangue, which assays from 15 to 300 ounces silver per ton; developed by a shaft 100 feet in depth and drifts and tunnels aggregating 150 feet.

**Union Flag.**—Israel Statts, Greeley, Colo., owner; Clarence K. Colvin, Idaho Springs, manager; claim 1500x150 feet; situated at Freeland, Trail Run Mining district, four and one-half miles from Idaho Springs; located August 6, 1877; vein a fissure, with a crevice eight feet wide, and a pay streak eighteen inches of argentiferous galena and zinc blende in a quartz gangue; developed by a shaft 100 feet deep and five shafts ten feet deep each.



**United Tunnel Group.**—Comprising the Silver Glance, Ora Belle, Mamie, White Quail, Snow-drift, and three other claims, 1500x150 feet each; W. F. Kelso, Georgetown, Colo., and J. P. Davie, Galveston, Texas, owners; claims situated on Kelso Mountain, West Argentine Mining district, four miles from Bakerville, Colo.; located in 1872; veins all fissures, with crevices from three to thirty-five feet in width, and pay streaks from three to twelve inches of galena, silver glance, and sulphurets, with a quartz gangue-matter, which assays from 300 to 600 ounces silver per ton; developed by shafts aggregating 100 feet, an open cut thirty feet in length, and a tunnel 270 feet in length, designed to open up all the lodes.

**Vancouver and Diamond.**—Julius Peytrenet, Wm. Shorthose, both Camp Clifford, Colo., and F. W. Bradley, Denver, Colo., owners; claims 1500x150 feet each; situated at Camp Clifford, York Mining district, three miles from Central City; located in 1879; veins both fissures, with crevices four feet in width each, and pay streaks from eight to twelve inches of gray copper, native and ruby silver, which mill-runs, when sorted from the gangue-matter of quartz, 125 ounces silver per ton; Vancouver developed by a shaft 130 feet in depth and levels 115 feet in length; worked by a fifteen-horse-power engine.

**Vanderbilt.**—Stephen Burrell and Michael Smith, both Georgetown, Colo., owners; claim 1500x150 feet; situated on Democrat Mountain, Griffith Mining district, one-half mile from Georgetown; located in 1882; vein a fissure, with crevice four feet wide, and a pay streak from one to twelve inches of galena in a quartz gangue; developed by an open cut thirty feet in length.

**Vermont Group.**—Comprising the Vermont, Mabel, and Adirondack lodes, 1500x150 feet each; D. C. Folsom and N. S. Hurd, both Georgetown, Colo., owners; claims situated on Kelso Mountain, Argentine Mining district, twelve miles from Georgetown; located in 1882; veins all fissures, with crevices from four to six feet in width, and pay streaks averaging six inches of yellow copper and galena in a quartz gangue, assaying $400 per ton; developed by an adit eighty feet in length.

**Veteran.**—L. & S. Sternberger, No. 503 Market street, Philadelphia, Pa., owners; claim 1500x150 feet; situated in Peck Gulch, York Mining district, two miles from Central City; located in October, 1881; vein a fissure, with a crevice two feet wide, containing galena and gray copper in a quartz gangue; developed by a shaft sixty-three feet in depth.

**Veto.**—J. S. and N. Updegraff, both Central City, and Nelson Hallock and Wm. R. Haven, both Denver, owners; claim 1400x150 feet; situated in Gillson Gulch, four miles from Central City, Idaho Mining district; located in 1867, and patented; the east 700x150 feet standing in the names of J. S. and N. Updegraff, and the west 700x150 feet in the names of Nelson Hallock and Wm. R. Haven; vein a fissure four feet wide, pay streak from six to twenty-four inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, $150 net per ton; developments—one shaft 230 feet in depth and drifts aggregating 550 feet; output $125,000.

**Victor Silver Mining Company (The).**—Incorporated under the laws of Colorado, April 7, 1876; capital stock $150,000, in 1,500 shares of $100 each, non-assessable; president, B. F. Claypool, Connorsville, Ind.; secretary and treasurer, E. F. Claypool, Indianapolis, Ind.; agent, M. Claypool, Georgetown, Colo; offices Indianapolis, Ind., and Georgetown, Colo; owns the Victor Group, nine claims, 1500x150 feet each; situated on Democrat Mountain, Upper Union Mining district, two and one-half miles from George town; three of the claims patented; veins all fissures, with crevices from seven

to twenty feet wide, and pay streaks from five to twenty inches of galena and yellow copper in a quartz gangue, which mill-runs, when sorted, from 250 to 400 ounces silver per ton; developed by one main tunnel 900 feet in length, other tunnels aggregating 2,200 feet, a shaft 325 feet in depth, and 4,000 feet of drifts; output $75,000.

**Virginia City.**—D. J. Ball, Empire, Colo., and Wm. W. Ware, Georgetown, Colo., owners; claim 1500x150 feet; situated on Lincoln Mountain, Upper Union Mining district, one and one-half miles from Empire, and patented in 1880; vein a fissure, with a crevice twenty inches wide, and a pay streak six inches of argentiferous galena in a quartz gangue, which mill-runs 150 ounces silver per ton, after sorting; developed by a shaft ninety feet in depth, a cross-cut tunnel ninety feet in length, and a drift on the vein 100 feet in length.

**Vulcan Group.**—Charles W. Pollard, Georgetown, Colo., owner; group comprises the Vulcan, Snow-drift, Elm City, Madison, Lorraine, Adrian, Amy, Titan, Olympic, and three other lodes, 1500x150 feet each; situated on Republican Mountain, Griffith Mining district, one-half mile from Silver Plume; veins all fissures, with crevices from three to ten feet in width, and pay streaks from two to sixteen inches of galena, gray copper, and sulphurets, which mill-runs $318 per ton, when sorted from the gangue-matter; developed by a tunnel on the Vulcan 420 feet in length, other tunnels aggregating 640 feet, and levels aggregating 800 feet; output $35,000; the Vulcan vein is cut by the Egan Tunnel (See Pay Rock Consolidated Mining Company) from which a drift is run with fair results.

**W. H. White.**—J. B. Chaffee, Denver, and J. T. Harris, Georgetown, Colo., owners; claim 1500x150 feet; situated on Republican Mountain, Griffith Mining district; located in 1866, and patented; vein a fissure, with a crevice two feet wide, and a pay streak from six to twelve inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 250 to 1,000 ounces silver per ton; developed by tunnel 600 feet in length and two shafts 50 and 100 feet in depth, respectively; output $15,000.

**Wall Street.**—Harry Lewes & Co., Dumont, Colo., owners; claim 1500x150 feet; situated on Middle Mountain, Downieville Mining district, two miles from Dumont; located in 1880; vein a fissure, with a crevice eight feet wide, and a pay streak from three to ten inches of argentiferous galena in a quartz gangue, which assays from 50 to 100 ounces silver per ton; developed by a shaft thirty feet in depth and three cross-cuts forty and ninety-three feet in length, respectively.

**Wall Street.**—W. P. Farris & Co., Georgetown, Colo., owners; claim 1500x150 feet; situated on Douglass Mountain, Griffith Mining district, four miles from Georgetown; located in 1881, and patented; vein a fissure, with a crevice two feet wide, and a pay streak twelve inches of galena and copper in a quartz gangue, which mill-runs, when sorted, 135 ounces silver per ton; developed by a tunnel sixty feet in length.

**Washington.**—Thomas Woodward, Georgetown, owner; claim 1500x150 feet; situated in the East Argentine Mining district, two and one-half miles south-west of Georgetown; vein a fissure three feet wide, containing argentiferous galena and gray copper in a quartz gangue-matter, which mill-runs, when sorted, fifty ounces silver per ton; developed by a tunnel 100 feet in length, a shaft 125 feet in depth, and 100 feet of drifting.

**Washington.**—B. C. Catron, Georgetown, Colo., owner; claim 1500x150 feet; situated on Democrat Mountain, Griffith Mining district, one-fourth



mile from Georgetown; vein a fissure, with a crevice three feet wide, and a pay streak six inches of galena and copper in a quartz gangue, which mill-runs, when sorted, $30 per ton; developed by a tunnel 100 feet in length.

**Washington Stamp-Mill.**—Situated on Main street, Georgetown; containing a number of Stamps, and other machinery, motive power for which is supplied by a twenty-horse-power engine.

**West Cashier.**—(See Cashier Silver Mining Company.)

**West Extension of Anglo-Saxon Group.**—G. J. Hite, S. P. Bishop, B. F. Turney, John S. Morris, and others, Georgetown, Colo., owners; group comprises eight claims, 1500x150 feet each; situated on Saxon Mountain, Griffith Mining district, one mile from Georgetown; veins all fissures, with crevices from four to ten feet wide containing gold-bearing quartz and galena, which mill-runs, when sorted, one ounce gold and thirty ounces silver per ton; developed by one main tunnel 176 feet in length, other tunnels aggregating 240 feet, and shaft sixty-five feet in depth.

**Westmoreland.**—W. C. Roberts, Georgetown, Colo., owner; claim 1500x150 feet; situated on Kelso Mountain, West Argentine Mining district, eleven and one-half miles from Georgetown, Colo.; located 1880; vein a fissure, with a crevice four feet wide, and a pay streak six inches carrying galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 200 to 1,000 ounces silver per ton; developed by an adit sixty-five feet in length; output $4,000.

**West Rip Van Winkle Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, W. B. Slosson, Leavenworth, Kansas; secretary and treasurer, Rodney Curtis, Denver, Colo.; superintendent, H. Bradley, Georgetown, Colo.; offices Denver and Georgetown, Colo.; owns the West Rip Van Winkle, 1500x150 feet; situated on Brown Mountain, Queen Mining district, four miles from Georgetown; vein a fissure, with a crevice ten feet wide and a pay streak six inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, 200 ounces silver per ton; developed by shaft 150 feet in depth, levels aggregating 150 feet, and tunnel ninety feet in length; output $10,000.

**West Summit.**—(See Mascott).

**Wheeling.**—James Henshall, Denver, Colo., owner; claim 1500x150 feet; situated on McClelland Mountain, East Argentine Mining district, eight miles from Georgetown; located 1869, and patented; vein a fissure, with a crevice from four to ten feet in width, and a pay streak from one to eight inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, 300 ounces silver per ton; developed by shaft eighty feet in depth and drifts 120 feet in length; output $20,000.

**White Cliff.**—Robert McBride, R. Smith, and Wm. Smith, all Dumont, Colo., and Dr. Eldrich, Chesaning, Mich., owners; claim 1500x150 feet; situated on Silver Creek, Montana Mining district; located 1880; vein a contact, with a crevice four feet wide, containing galena and carbonates, with a decomposed gangue-matter, which assays 176 ounces silver per ton; developed by tunnel 100 feet in length and a level sixty feet long on the vein.

**White Cloud.**—(See Gilpin County).

**White Pine.**—H. Bradley and Mary E. Gray both, Georgetown, Colo., owners; claim 1500x150 feet; situated on Democrat Mountain, Upper Union Mining district, two and one-half miles from Georgetown; located in 1879; vein a fissure, with a crevice twenty feet wide, and a pay streak twelve inches of galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 50 to 150 ounces silver per ton; developed by a shaft 125 feet in depth and two levels 90 feet in length each; output $3,000, and the property is in good shape for future developments.

**Wild Rose.**—Clarence K. Colvin, J. H. Shepherd, and W. A. Ireland, all Idaho Springs, Colo., and Jonas Washburn, Denver, Colo., owners; claim 1500x150 feet; situated in Spring Gulch, Trail Run Mining district, two miles from Idaho Springs; located in June, 1881; vein a fissure, with a crevice eight feet wide, and a pay streak from eighteen to twenty inches of gray copper and brittle silver in a quartz gangue, which assays from $50 to $415 per ton, and probably averages $76.97 per ton by assay test; developed by a shaft fifty-five feet in depth.

**Wide West Group.**—George Tyler and others, Georgetown, Colo., owners; group comprises eight claims, 1500x150 feet each; situated on Leavenworth Mountain, Griffith Mining district, three miles from Georgetown, and all patented; veins all fissures, with crevices from two to four feet wide, and pay streaks from six to twenty inches of galena, gray copper, and zinc blende, in a quartz gangue, which mill-runs, when sorted, 120 ounces silver per ton; developed by an adit 900 feet in length and 600 feet of levels.

**Willamette.**—(See Rescue.)

**Willihan.**—Daniel Doyle, Georgetown, Colo., owner; claim 1500x150 feet; situated on Sherman Mountain, Griffith Mining district, two and one-half miles from Georgetown; located in 1878, and patented; vein a fissure, with a crevice five feet wide, and a pay streak from four to six inches of galena and sulphurets in a quartz gangue, which mill-runs, when sorted, from 50 to 400 ounces silver per ton; developed by three adits aggregating 215 feet in length and a shaft twenty-five feet in depth; output $30,000.

**Wisconsin Central.**—Edward Riley & Co., Georgetown, owners; claim 1500x50 feet; located in 1865, and situated on Kelso Mountain, West Argentine Mining district, nine miles from Georgetown; vein a vertical fissure, five feet wide, pay streak fifteen inches, containing galena in a quartz gangue, which mill-runs, when sorted, $50 per ton; developments—three adits aggregating 555 feet in length; output $3,000.

**Wolverine.**—Owned by Paschal R. Smith and Samuel Y. Smith, both Denver, Colo., and James Collins and Jos. Galler, Central City, Colo.; claim 1500x150 feet; situated in Virginia Mining district, near Central City; vein a fissure, with crevice two and one-half feet wide, containing galena and iron pyrites, carrying gold and silver, which mill-runs four ounces gold, after sorting from the quartz gangue; developed by a shaft 100 feet in depth and level forty feet in length.

**Wolverine Gold and Silver Mining Company (The).**—Incorporated under the laws of Michigan in 1879; capital stock $25,000, in five shares of $5,000 each, non-assessable; president and general manager, J. W. La Munyon, Dumont, Colo.; vice-president, R. H. Nason, Michigan; western secretary, H. R. Ottman, Dumont, Colo.; eastern secretary, W. H. Niver, Chesaning, Mich.; offices Chesaning, Mich., and Dumont, Colo.; owns the following lodes, viz.: Wolverine Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, Pana, Hamilton, Nos. 1, 2, 3, 4, 5, Josie D., and Mackwan, 1500x150 feet each, situated on Wolverine Mountain, Lincoln and Downieville Mining districts, and Peninsular lode, 1500x150 feet, situated on Democrat Mountain, Griffith Mining district; patented in 1882; veins all fissures, with crevices varying from two to eight feet in width; in the Wolverine Group the ore is iron and copper pyrites, carrying gold and silver; mill-runs from $12 to $360 per ton, when sorted from the gangue-matter; Peninsular vein four and one half feet in width, containing sulphurets in a quartz gangue; mill-runs, when sorted, from 25 to 1,000 ounces silver per ton; Wolverine Group developed by a tunnel 360 feet in length, with some drifting; Peninsular by a tunnel seventy-five feet in length.



**Woodchuck.**—Herman Meinhardt, John Dreifurst, F. G. Gaol, all Georgetown, Colo., owners; claim 1500x150 feet; situated on Kelso Mountain, Argentine Mining district, two miles from Bakerville; located in 1878; vein a fissure, with a crevice from six inches to four feet wide, and a pay streak from one to four inches in width of galena and gray copper in a quartz gangue, which assays from 100 to 150 ounces silver per ton; developed by a tunnel 180 feet in length, and shaft fifteen feet in depth.

**Worcester.**—Wm. Mendenhall and Peter Peterson, both Georgtown, Colo., owners; claim 1500x150 feet; situated on Kelso Mountain, ten miles from Georgetown; located in 1870; vein a fissure, with a pay streak from eight to sixteen inches wide of galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 50 to 150 ounces silver per ton; developed by a tunnel 150 feet in length and a shaft twenty-five feet in depth; output $2,000.

**Yandes Silver Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1876; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president, B. F. Claypool, Connersville, Ind.; secretary and treasurer, E. F. Claypool, Indianapolis, Ind; agent, M. Claypool, Georgetown, Colo.; offices Indianapolis, Ind., and Georgetown, Colo.; owns the New Loan lode, 3000x50 feet; situated on Sherman Mountain, Griffith Mining district, two miles from Georgetown; vein a fissure, with a crevice five feet wide, and a pay streak from four to eight inches of galena in a quartz gangue, which assays sixty ounces silver per ton; developed by an adit 350 feet in length.

**Yellow Jacket Group.**—Comprising the Yellow Jacket, Clifford No. 2, Rosita, War Eagle, Little Chief, and Daisy lodes; H. B. Gilbert, R. A. Beverly, both Nevadaville, Colo., and Joseph Keeley, Chicago, Ill., owners; claims 1500x150 feet each; situated at Camp Clifford, Lincoln Mining district, three miles from Central City; located in 1880; veins all fissures, with crevices from two to six feet wide, and pay streaks from three to twelve inches of argentiferous galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 137 to 300 ounces silver per ton; Yellow Jacket developed by a shaft 135 feet in depth, and the other lodes by shafts from ten to thirty feet in depth each; output $2,500.

**Young America.**—John Coburn, Lawson, Colo., owner; claim 1500 x150 feet; situated on Red Elephant Mountain, Downieville Mining district; located in 1862; vein a fissure, with a crevice from three and a half to five feet in width, and a pay streak from one to twenty-four inches in width of iron pyrites and galena with a quartz gangue, which mill-runs, when sorted, from $250 to $500 per ton; developed by a shaft 260 feet in depth; output $30,000.

# Costilla County.

**Hidden Treasure.**—Frank J. Matt and J. A. Dawson, both Denver, Colo., A. Hamilton, Placer, Colo., and W. Dodson, New York City, owners; claim 1000x300 feet; situated on Grayback Mountain, Russell Mining district, five miles north of Russell and thirty-five miles north of St. Luis; located in 1880; vein a fissure, with a crevice five feet wide, and a pay streak from six to twenty-four inches of gold and silver bearing quartz, which mill-runs, when sorted, $200 per ton; developed by a shaft 100 feet in depth; output 100 tons of ore.

**Placer Iron Mines.**—Owned by the Colorado Coal and Iron Company (see Colo. C. and I. Co., Gunnison County); superintendent, D. N. Jones, Placer, Colo; property situated on Grayback Mountain, Russell Mining district, five miles from Placer and thirty-five miles north of St. Luis; located in 1880; contains a stratum, or vein, of magnetic iron twelve feet thick, with some gangue-matter, which mill-runs, when sorted, fifty-two per cent iron; developed by six tunnels aggregating 650 feet; improvements—one tramway two and one-half miles in length, connecting the mines with D. & R. G. Railway and several buildings; output 25,000 tons of iron.

# Custer County.

This County is situated east of and adjoining the Sangre DeCristo Range, and is bounded on the north by Fremont, on the east by Pueblo, and on the south by Huerfano County. It covers an area of 1,000 square miles, and has an estimated population of 8,500, with Silver Cliff as the chief center, although there are a number of other towns of less note.

The first discoveries of paying mineral occurred in the vicinity of Querida, and it is pretty safe to state that of the County's future production by far the greater proportion will come from within a radius of four miles from that place. The mines located around Silver Cliff, and which created its prestige as a thrifty camp, have been idle for some time; and the same remark holds good in relation to the mills. In explanation of this condition of things the State Geologist's report says: "Those familiar with the situation will readily understand the cause. The better mines are in the hands of corporations who do not work them, owing to the failure of conclusions drawn from false premises respecting the character and value of the principal deposits and the course of treatment required for the profitable extraction of the precious metals. Having reached the limit of speculation in stocks, the projectors have no further use for the works, and therefore, with a few exceptions, the whole mining interest of the County has fallen into decay."

This is true; at the same time it is unquestionable that the properties around Silver Cliff contain enormous resources of milling material, which, though not largely of the class known as high-grade, is yet sufficiently valuable to pay reasonable returns under wise management. If the companies who hold the better mines would only come to some agreement in relation to reducing the ores on a large scale, thereby making them profitable by the accumulation of small savings, Custer would resume its position as one of the important mining counties of the State. All that is needed is the right measures and a reasonable application of the same.

The output for 1881 was $800,000, of which amount $100,000 was gold and $700,000 silver, although it has been carefully estimated at only $755,600, while in 1882 the returns showed a decline to $705,116, owing, no doubt, to the causes already stated.

**Abandoned.**—S. J. Prisk and W. J. Prisk, both Silver Cliff, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, one and one-half miles from Silver Cliff; located in 1878; vein has defined walls and contains argentiferous galena and zinc blende in a porphyry gangue, which mill-runs, when sorted, about twenty-five ounces silver per ton; developed by two shafts 40 and 125 feet in depth, respectively.

**Adelia Silver Mill.**—W. Cowgul, A. P. Hamilton, P. Loveall, W. D. Lee, and R. R. Waltc, owners; works situated one mile from Silver Cliff, Colo.; containing twenty Stamps, Thompson Pulverizer, Crusher, etc., motive power for the same being supplied by a seventy-five-horse-power engine; capacity twenty tons of ore per day.

**Alta Verde Mining Company.**—Incorporated under the laws of Colorado, October 30, 1876; capital stock $30,000, in 600 shares of $50 each, non-assessable; president, George Boyce; vice-president and manager, Alexander Thornton; secretary and treasurer, R. N. Clark; owns the Alta lode, 1500x300 feet; located in 1876; situated in Verde Mining district, five miles from Ula and five miles from Rosita; vein has fairly defined walls and contains a pay streak about twelve inches wide of gray and yellow copper, milling, when sorted from the quartz and porphyry gangue-matter, from thirty to fifty ounces silver per ton; developed by a drift seventy-five feet in length; and the Verde, 1500x300 feet, adjoining the Alta, containing a similar ore, and developed through the same workings.

**Arminius.**—Owned by Carl Wulsten, Rosita; claim 1500x300 feet; located 1877; situated on Game Ridge, Hardscrabble Mining district, one-half mile from town of Rosita; vein varying in width from one to three feet, pay vein from one to two inches, containing gray copper and iron and copper pyrites in a quartz and baryta gangue; developments—one shaft twenty feet deep and one tunnel ninety-two feet in length.

**Bassick Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1879; president, F. G. Brown; vice-president, Dennis Ryan; secretary, W. S. Hayt; treasurer, Wm. F. Vanselt—all New York; superintendent, C. C. Perkins, Rosita, Colo.; offices 44 Wall street, New York City, and Rosita, Colo.; owns the Bassick mine, 1500x300 feet; situated at Querida, Hardscrabble Mining district; located in 1878, and patented; in which the formation and mineral deposit is described by Prof. J. Alden Smith as follows: "Originally it appears to have been an active geyser, and the spaces between the boulders and angular fragments of rock, after the subsidence of the thermal waters, were filled with rich auriferous and argentiferous ores, mixed with a calcareous gangue. It is well known that most of the ore occurs in the form of shell-like coatings on boulders, varying from a mere scale to an inch or more in thickness; and it is asserted that the coating increases in thickness as depth is gained in the mine. The body of boulders forms a circular 'chimney,' 'well hole,' or minute crater, from twenty to eighty feet in diameter, with apparently no well-defined, continuous vein extending from it in any direction. The ore consists of the sulphides of zinc, iron, lead, and copper, with, it is said, some tellurides, but I have seen none of the latter species. They are usually rich in gold and silver; some extraordinarily so, running up to thousands per ton, chiefly gold;" although the general average of the ore, when sorted, is from $25 to $75 per ton; developments—one tunnel 360 feet long and one shaft 728 feet deep, with considerable drifting and stoping; improvements—a 121-horse-power engine, of Fraser & Chalmers make, with the necessary buildings; output, although hard to determine, is in the vicinity of $500,000; and the Lookout and Main lodes, 1500x300 feet each; situated in the same vicinity, on which the Company is doing development work; also owns a concentration-works, situated near the mine; main building 100x50 feet, and containing Rolls of the Braker patent, and Hartz and Bradford Jigs, with a capacity to concentrate sixty tons of ore per day; Company employs 125 men.

**Belfast.**—Owned by Powell, Edwards, Hafford, and McComb; claim 1500x300 feet; located in August 1878, and situated in town of Silver Cliff; developed by a surface opening thirty feet in length and a shaft twenty-five feet deep.

**Belle Milling and Mining Company (The).**—Incorporated under the laws of Illinois; capital stock $1,000,000; president, Horace Brown; secretary and treasurer, Charles W. Haskell—both Rockford, Ills.; vice-president and manager, E. J. Haskell, Silver Cliff; offices Rockford, Ill.



and Silver Cliff, Colo.; owns sixteen claims, the principal of which is the Belle of the Gulch; situated near Querida, and about one mile from the Bassick property, Hardscrabble district; located in 1880; veins have walls somewhat defined, with crevices varying in width from three to twelve feet, containing a vein-matter of calcareous quartz and an ore of copper and gold bearing quartz, milling, when sorted, from $50 to $110 per ton; the developments consisting of one main shaft 110 feet in depth, 165 feet of levels and considerable surface-workings; improvements—steam hoisting and pumping machinery, with the necessary buildings.

**Belle of the Gulch.**—(See Belle Milling and Mining Company.)

**Ben Franklin Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Col. Kersey Coates; vice-president, W. McGrue; secretary and treasurer, Gardiner Lathrop—all Kansas City, Mo.; offices 117 West Sixth street, Kansas City, Mo., and Silver Cliff, Colo.; owns the Ben Franklin mine, 1500x300 feet; situated in Hardscrabble Mining district, about two miles from Rosita; located in 1877, and patented in 1882; vein has fairly defined walls and might, perhaps, be called a fissure, with a crevice varying in width from ten to fifteen feet, and a so-called pay streak from six to fourteen inches of galena and gray copper in a quartz and baryta gangue, milling, when sorted, from $50 to $85 dollars per ton; the developments consisting of one main shaft 260 feet deep, two other shafts fifty and seventy-five feet deep, respectively, and 900 feet of levels, with considerable stoping; output estimated at $10,000 prior to 1881, but of late the property has been idle.

**Black Diamond.**—A. E. Hess, Rosita, Colo., owner; claim 1500x150 feet; situated in Hardscrabble Mining district, about two miles from Rosita; located in 1883; vein has defined walls, with a crevice four and one-half feet wide, containing a chloride ore in a heavy spar gangue, assaying from $150 to $600 per ton; developed by a shaft fifteen feet in depth.

**Black Hawk.**—D. Converse, H. Ingraham, and S. C. Clark, all Silver Cliff, owners; claim 1500x300 feet; situated in Hardscrabble Mining district, near Silver Cliff; located in 1882; vein has defined walls, with a crevice eight feet wide, containing galena and sulphurets, iron and copper pyrites, carrying gold and silver, which assays six ounces gold and thirty-five ounces silver per ton, with a porphyry gangue; developed by a shaft forty-five feet in depth.

**Boston.**—J. R. Miner and John L. Miner, both Silver Cliff, owners; claim 1500x300 feet; situated in Hardscrabble Mining district, five miles from Silver Cliff; located in 1882; vein has defined walls, with a crevice twenty-five feet wide, containing a telluride ore in a quartz and porphyry gangue, which mill-runs, when sorted, $20 per ton; developed by a shaft ten feet in depth.

**Boulder and Buffalo Hunter Mining Company (The).**—Incorporated under the laws of Colorado; president, E. F. Hallack, Denver; owns the Boulder and Buffalo Hunter, two patented claims 1500x300 feet each; situated on the north side of Wet Mountain Valley, and on the Silver Cliff Bluff, at Silver Cliff, Hardscrabble Mining district; in which the formation is porphyritic for a depth of at least 150 feet, through which is scattered pockets of chlorides and horn-silver, both in the free state and associated with the porphyry, with considerable manganese in the upper workings and iron pyrites in the lower workings, the mineral being very similar to that in the Silver Cliff Mining and Milling Company's property, only that it ap-

pears in the form of pockets and is possibly a little higher grade; the developments consisting mainly of surface-working, not unlike a quarry; output to January, 1881, about $2,600, but of late the property has been idle; also owns a stamp-mill adjoining the mines, containing 100 Stamps, with amalgamating-pans.

**Bryant.**—R. T. Bryant and C. E. Brewer, both Council Bluffs, Iowa, C. C. Smith and others, Rosita, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, one-half mile from Rosita, Colo.; located in 1881; vein has fairly defined walls, with a pay streak one and one-fourth inches, wide containing gray copper, which assays $600 per ton, and a gangue of heavy spar and quartz; developed by a shaft sixty-eight feet in depth.

**Bull Domingo Mining Company (The.)**—Incorporated under the laws of New York, in the winter of 1881 and 1882; capital stock $200,000, in 200,000 shares of $1 each, non-assessable; president, vice-president, secretary, N. B. Stevens, 45 Williams street, New York; owns four patented locations, viz.: the Bull Domingo and Johnny Bull, the surface ground of which conflicts, and covering about fifteen acres; situated at the foot and on the south slope of Blue Ridge, two and a half miles northeast of Rosita, Hardscrabble district; the formation in this property is peculiar, but it is well known that in the workings near the surface the ore occurs in the form of shell-like coatings on boulders, varying from a mere scale to an inch or more in thickness, increasing in thickness as depth is gained, and consisting of the sulphides of zinc, iron, and lead, sometimes rich in silver, the body of the boulders forming a circular chimney without any defined wall or continuous vein extending from it in any direction until a considerable depth is gained, when the chimney seems to run into a lead, with granite walls, varying from 50 to 150 feet in width, the mineral in which is principally galena in a quartz gangue-matter, occasionally in a calcareous form, containing very rarely wire-gold; average value of the ore—fifty per cent lead and sixty ounces silver per ton, when sorted, although portions of it mill much higher; developments—one shaft 350 feet deep, 12x6, with three compartments and about 1,000 feet of cross-cuts, level, and winzes; improvements—steam hoisting and pumping machinery, one seventy-five-horse-power engine, and ample boilers, with the necessary buildings; output about $300,000; and two other claims contiguous to the Bull Domingo and Johnny Bull, on which the Company is doing development work; also owns a concentrating-works containing two Blake Crushers, two sets of Cornish Rolls, and twelve Hartz Jigs Rom; situated on Grape Creek, two miles from the mine, and two and a half miles from Silver Cliff.

**Bunker Hill Consolidated Mining Company (The.)**—Incorporated under the laws of Colorado, in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Carl Wulsten; vice-president and treasurer, A. J. Williams; secretary, Edward Chiles; offices Denver; owns three claims adjoining on the same vein, 1500x300 feet each, viz.: Bunker Hill, Lexington, and Concord; situated on Bunker Hill Mountain, at Querida, Hardscrabble district, and patented; vein is claimed to be a contact, with a granite hanging and porphyry foot-wall, and an average width of three feet, containing pockets of galena, said to be associated with some sulphurets of silver and telluride of gold in an abundant gangue of decomposed porphyry which mills, when sorted, about $30 per ton in gold and silver; developments—five shafts aggregating 500 feet, with connecting levels aggregating 1,000 feet; improvements—steam hoisting machinery, ore-houses, shaft-houses, and boarding-houses.

**California.**—1500x300 feet; situated in the Hardscrabble district, and said to be on the Bull Domingo vein, with a formation somewhat similar,



and containing an ore consisting of the sulphides of zinc, iron, and lead, in the form of shell-like coatings on boulders, varying in thickness from a mere scale to probably an inch, in a calcareous gangue-matter, milling, when sorted, from $15 to $45 per ton; the developments consisting of about 500 feet of work.

**Columbus.**—Owned by Carl Wulsten, Rosita; claim 1500x300 feet; located in 1875; situated on Game Ridge, Hardscrabble Mining district, a half mile from Rosita; vein varies in width from one to three feet, pay vein from one to three inches, containing gray and yellow copper in a heavy spar and quartz gangue, assaying from 25 to 125 ounces silver per ton; developments—two shafts thirty-five and seventy-five feet in depth, respectively.

**Cosmos Mining Company (The).**—Incorporated under the laws of Colorado in 1883; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, S. D. Hayward; vice-president, Carl Wulsten; secretary and treasurer, Edward Chiles; office Denver; owns seven claims, 1500x300 feet each, viz.: Bonanza, Cosmos, Carbonate, Engineer, Philadelphia, Prospector, and Trachyte, with three mill sites; situated on the Dutch Flats, at Querida; located in 1877-78; in some of which there appears to be leads, with granite and porphyry walls varying in width from one to four feet, containing pockest of galena, possibly associated with some silver sulphurets scattered through an abundant gouge, milling, when sorted, from $10 to $30 per ton, while in the Bonanza the mineral is not in place, and seems to be scattered through a porphyritic formation; developments—twelve shafts, some of which have double compartments, aggregating about 1,000 feet, and 200 feet of tunnels.

**Combination Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, C. C. Smith, La Cross, Wis.; treasurer, G. C. Campbell, Steven's Point, Colo.; general manager, W. H. Smith, Silver Cliff, Colo.; office Silver Cliff; owns the Combination lode; situated in the Hardscrabble Mining district, near Silver Cliff; located in 1880; vein has defined walls, with a crevice five feet wide, containing iron pyrites and gold quartz, which mill-runs, when sorted from the porpyhry gangue, $50 per ton; developed by a shaft fifty-three feet in depth, and a stamp-mill containing twenty Stamps, situated near Silver Cliff, with a capacity to treat twenty tons in twenty-four hours.

**Copper.**—David Bricker, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in the Hardscrabble district, near Silver Cliff; located in 1880; vein has defined walls, with a pay streak eighteen inches wide, containing copper and galena carrying both gold and silver, and assaying thirty per cent copper, nine ounces gold, and seventy-two ounces silver per ton, with a porphyry gangue; developed by a shaft thirty-eight feet in depth.

**Copper Bottom.**—(See Empire Gold and Silver mining Company.)

**Cora B.**—S. J. Prisk and P. R. Voreiter, both Silver Cliff, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, one and one-half miles from Silver Cliff; located in 1878; vein has somewhat defined walls and contains an ore of galena and carbonates, assaying ten per cent lead and forty ounces silver per ton, with a porphyry gangue and vein-matter.

**Cymbeline.**—Richard Irwin and Thomas C. Parrish, both Rosita owners; claim 1500x300 feet; located in 1873; situated on Game Ridge, Hardscrabble Mining district, within the limits of Rosita; vein has defined walls, with a crevice from one to three feet in width, and a pay streak from one to

four inches of galena and sulphurets in a baryta and quartz gangue, assaying from twenty-five to fifty ounces silver per ton; developed by one shaft eighty feet deep.

**Del Monte.**—Sargeant, Combs & Co., Rosita, owners; claim 1500x300 feet; located in 1876; situated near Bunker Hill, Hardscrabble Mining district, three miles from the town of Rosita; vein has somewhat defined walls, with a crevice from four to eight feet wide, and a pay streak from two to ten inches of galena and carbonates in a calcareous quartz gangue, milling, when sorted, from 25 to 100 ounces silver per ton; developed by two shafts about 100 and 75 feet in depth, respectively, with some drifting.

**Delaware River.**—S. J. Prisk, W. J. Prisk, and Geo. P. Detdering, all Silver Cliff, Colo., owners; claim 1500x300 feet; situated one and one-half miles from Silver Cliff, in the Hardscrabble Mining district; located in 1878; vein has somewhat defined walls, and contains galena and zinc blende in a porphyry gangue, which mills, when sorted, about twenty-five ounces silver per ton.

**Duryee Smelting Company.**—President, Geo. B. Wright, Indianapolis, Indiana; vice-president, C. P. L. Butler; secretary, W. Y. Miles—both Columbus, Ohio; treasurer, T. Allen; general manager, S. E. Ogden—both Silver Cliff, Colo.; offices Columbus, Ohio, and Silver Cliff, Colo.; owns a smelting-works situated about one-fourth of a mile from Silver Cliff; main building 96x40 feet, containing one Pupela sixty feet in length and thirty two inches in diameter, one Lead-well 4½x7½ feet, Fuel Furnace 3½x4½ feet, Stutevant Blower fourteen inch, thirty-six Condensing Cylinders 300 feet in length and 3x4 inches in diameter, and improved Crushers and Rolls; motive power for the same being supplied by a fifty-horse-power engine; capacity 100 tons in twenty-four hours.

**Edna.**—J. C. McBride, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in the Hardscrabble Mining district, eighteen miles from Silver Cliff; located in 1880; vein is probably a fissure, with a crevice two and one-half feet wide, containing quartz carrying gold, assaying $40 per ton; developed by a shaft twenty feet in depth.

**Empire Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois; capital stock $500,000; president, Geo. S. Haskell; vice-president, Chas. O. Upton; secretary and treasurer, Alfred P. Wells—all Rockford, Ill.; general manager, E. J. Haskell, Silver Cliff, Colo.; offices Rockford, Ill., and Silver Cliff, Colo.; owns the Copper Bottom and three other claims, covering 6000x300 feet, on the same lead; situated in the Hardscrabble district, near Silver Cliff; located in 1879, and patented; vein has a crevice varying in width from four to eight feet, and contains gold-bearing quartz, milling, when sorted, from $25 to $50 per ton; developments—one shaft 110 feet deep and 100 feet of levels.

**Eva.**—H. Morrow, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in Cottonwood Gulch, Hardscrabble Mining district, near Silver Cliff; located in 1879; vein has defined walls, with a crevice four feet wide, containing quartz carrying both gold and silver, which assays $30 per ton; developed by a shaft seventy-five feet in depth.

**Eureka Gold and Silver Mining Company (The).**—Incorporated in 1880; superintendent and general manager, W. H. Husband; office Rosita, Colo.; owns the Eureka lode, 1200x300 feet; situated on Eureka Hill, Hardscrabble Mining district, one mile from Rosita; vein has defined walls, with a pay streak about nine inches wide, containing gray and yellow copper in a baryta and quartz gangue, milling, when sorted, sixty ounces silver per ton; developed by two shafts 200 and 280 feet in depth, respectively, and a twenty-five-foot level; worked by an eighteen-horse-power engine and full plant of steam machinery.



**Exchange.**—C. C. Smith and A. E. Hess, both Rosita, Colo., owners; claim 1500x300 feet; situated on Exchange Hill, in Hardscrabble Mining district, two miles from Rosita; located in 1882; vein a contact, with defined walls of porphyry and granite, and a crevice three feet wide containing galena and carbonates carrying silver, assaying from $100 to $300 per ton, and a gangue and vein matter of calcareous quartz; developed by a shaft thirty-five feet in depth.

**Forest City Mining and Milling Company (The).**—Incorporated under the laws of Colorado; E. J. Haskell, Silver Cliff, general manager and agent; owns eight full claims, 1500x300 feet each; situated in Hardscrabble Mining district, near Silver Cliff; located 1880; veins have somewhat defined walls, and contain red hematite, horn-silver, and sulphurets in a porphyry gangue, which mill runs, when sorted, from $100 to $250 per ton; developed by an incline shaft eighty feet in length and a tunnel 175 feet in length; output 300 tons of ore.

**G. V. F.**—Owned by A. M. McElhenney and W. Emigh, both Rosita; claim 300x300 feet; located in 1874; situated in Nebraska Gulch, Hardscrabble Mining district, one mile from Rosita; vein has defined walls and varies from two to four feet in width, pay vein from two to four inches, containing gray copper in a baryta and quartz gangue, milling, when sorted, from 25 to 100 ounces silver per ton; developed by one shaft 100 feet deep and a twenty-five-foot level, with some surface improvements.

**General Custer.**—Owned by Duncan, Adams & Webb, Rosita; claim 1500x300 feet; located in 1875; situated on Robinson Hill, Hardscrabble Mining district, one-half mile from Rosita; vein has somewhat defined walls and is vertical, from one to two feet wide, with a pay streak from two to six inches of iron and gray copper, assaying from twenty-five to fifty ounces silver per ton, and a quartz and baryta gangue; developments—two shafts sixty and forty feet deep, respectively, and a twenty-foot level.

**Golden Era.**—Owned by Edmund C. Bassick, Bridgeport; property comprises twenty acres of mineral land; situated on Tyndall Hill, Hardscrabble Mining district, three miles from Rosita; the nature of the ore is galena, zinc blende, sylvanite, and free gold; formation is a calcareous quartz, through which is interspersed pockets of galena and zinc blende, with sylvanite and sometimes free gold, milling, when sorted, from $50 to $500 per ton; developments—one double-compartment shaft 300 feet deep, two tunnels 175 and 450 feet in length, respectively, and four levels from 40 to 200 feet long, one of the tunnels intersecting the shaft at a depth of 200 feet, at which point a chamber has been excavated for machinery; output is said to be over $100,000, with a large body of low-grade ore remaining on the dumps.

**Golden Fleece.**—Owned by Ely Gill and H. C. Nichols, both Ula; claim 1500x300 feet; located December 24, 1878; situated two miles from Silver Cliff and eight miles from Rosita; developments consist of a shaft twenty-five feet deep showing a fair material, assaying from twenty to thirty ounces silver per ton.

**Good Neighbor.**—J. W. Lawrence, Silver Cliff, Samuel Davis, Rosita, E. C. Bassick, Bridgeport, R. J. Stegel, Pueblo, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, near Silver Cliff; located

in 1877; vein has somewhat defined walls, with a crevice varying in width and containing a telluride ore in pockets, assaying 200 ounces silver per ton, with a porphyry gangue; developed by two shafts 65 and 115 feet in depth, respectively.

**Governor Pitkin.**—Owned by Charles F. Burrell, Denver, Colo.; claim 1500x300 feet; located in September, 1878, and situated three miles from town of Silver Cliff and seven miles from Rosita; developments—one-twelve-foot shaft showing a fair material.

**Great Wonder Group.**—C. C. Smith, S. C. Clark, W. Wallace, and J. D. Powell, all Silver Cliff, Colo., owners; group consists of six claims, 1500x300 feet each; situated in Hardscrabble Mining district, near Silver Cliff; located in 1882; veins have somewhat defined walls, with crevices varying in width and containing decomposed quartz, carrying gold and silver, on which mill-tests have shown as high as $60 per ton.

**Hayden Gold and Silver Mining Company (The.)**—Incorporated under the laws of Colorado, July 24, 1880; capital stock $3,000,000, in 300,000 shares of $10 each; president, A. D. Ellis; vice-president, J. H. Buckingham; secretary, H. L. Payson, Jr.; treasurer, J. O. Whitney, all Chicago, Ills.; superintendent, Anthony Barker, Rosita Colo.; offices Room 16 *Times* Building, Chicago, Ills., and Rosita, Colo.; owns the Payson, Loveday, and Hayden lodes, 1500x300 feet each; situated one mile and a half northeast of Rosita, in Hardscrabble Mining district; veins have defined walls with a crevice in the Hayden seven feet in width, and a pay streak averaging three inches of galena and sulphurets, which assays from ten to fifty-seven ounces silver per ton, with a quartz and baryta gangue; in the Loveday four feet in width, with no well defined pay streak, but containing galena scattered through the entire quartz and baryta crevice-matter; in the Payson three feet in width, the vein-matter being mainly a mineralized quartz; the Hayden developed by a shaft 135 feet in depth, and the others by shafts ten feet in depth each.

**Henry Clay.**—John L. Miner and John Hastings, both Silver Cliff, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, five miles from Silver Cliff; located 1881; vein is said to be a contact, with porphyry and granite walls, and a crevice four feet wide, containing carbonates, assaying 100 ounces silver per ton, with a porphyry gangue; developed by a shaft twenty-six feet in depth.

**Hidden Treasure.**—Hattie A. Palmer and J. T. Cooper, both Rosita, Colo., owners; claim 1500x300 feet; situated on Robinson Hill, Hardscrabble Mining district, near Rosita; located in August 1879, and containing two veins with defined walls, one of which has a pay streak about eighteen inches wide of gray copper in a baryta gangue, the latter carrying gold, assaying $40 per ton, and the other a pay streak about eight inches wide of gold-bearing quartz, milling from $50 to $75 per ton; the developments consisting of one ninety-eight-foot shaft.

**Homestead.**—John L. Miner, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in Hardscrabble Mining district, about five miles from Silver Cliff; located in 1881; vein is said to be a contact, with porphyry and granite walls, and a crevice two and one-half feet wide, containing carbonates in a porphyry gangue; mill-runs, when sorted, fifty-two ounces silver per ton; developed by a shaft thirty-eight feet in depth.

**Humboldt Silver Mining Company (The).**—Incorporated under the laws of Colorado, October 20, 1875; capital stock $74,000, in



seventy-four shares of $1,000 each, non-assessable; president, George Boyce; vice-president and general manager, Alexander Thornton; offices Sharon, Pa., and Rosita, Colo.; owns the Humboldt property, covering 1902x300 feet of patented ground; situated in the Hardscrabble district, near Rosita; the mineral appearing in what may properly be termed a lead, varying in width, and containing a so-called pay streak from one and one-half to two and one-half feet in width; ore—gray copper, with ruby and brittle silver in a very considerable gangue, milling, when sorted, sometimes as high as 760 ounces silver per ton, although the average of the ore would not run near that high; the developments consisting of a shaft 815 feet deep, an air shaft 1,500 feet deep, with more than a mile of levels and drifts; improvements—a double fifty-horse-power engine, of Fraser & Chalmers' make, for hoisting and pumping, with the necessary buildings; output to November 1, 1882, about $500,000; in addition to which there is probably 4,000 tons of ore on the dump, worth over $100,000, and it is estimated that there is in reserve opened up $960,000 worth of ore.

**Hurricane.**—Jerald R. DeReimer, Buena Vista, James R. DeReimer, Pueblo, and B. H. DeReimer, Salida, owners; claim 1500x300 feet; situated on Ben Franklin Ridge, Hardscrabble Mining district, two and one-half miles from Rosita; located in 1879, and in process of patent; vein has defined walls, with a crevice four and one-half feet wide, and a pay streak from eight to twenty inches of galena and copper in a baryta and quartz gangue, milling, when sorted, fifteen per cent copper and from fifty to seventy-five ounces silver per ton; developed by a shaft 125 feet in depth; output forty tons of ore.

**I. L.**—A. E. Hess, George F. Browler, and J. R. McCurry, all Rosita, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, six miles from Silver Cliff; located in 1875; vein has porphyry and granite walls, and a crevice three feet wide of argentiferous galena in a porphyry gangue, assaying from 15 to 426 ounces silver per ton; developed by a shaft thirty-five feet in depth.

**Indian Chief.**—Owned by Alfred D. Avery, Charles R. and William S. Hurd, Denver and Silver Cliff, Colo.; claim 1500x300 feet; located in 1878, and situated on Round Mountain, one mile from Silver Cliff; vein has somewhat defined walls and contains a chloride of silver ore, assaying from 25 to 125 ounces silver per ton, and a porphyry gangue; developed by one sixty-foot shaft.

**Invincible.**—Owned by J. H. Haverly, Chicago; claim 1500x300 feet; situated in the Hardscrabble district, about three-fourths of a mile from Rosita; located in 1873; containing a lead with somewhat defined walls, and a pay streak varying in width from five to fifteen inches of argentiferous galena associated with a small percentage of native silver in a gangue-matter of quartz and baryta, milling, when sorted, from 25 to 100 ounces silver per ton; developments—one main shaft 280 feet deep with some drifting and stoping; improvements—one twenty-five-horse-power engine, with the necessary buildings; property has been idle of late, but made some shipments prior to January 1, 1881.

**Iowa State.**—H. C. Potts, Querida, Colo., and L. Cummings, Sand Springs, Iowa, owners; claim 1500x300 feet; situated in Hardscrabble Mining district, near Silver Cliff; located in 1882; vein has defined walls, with a crevice twelve feet wide containing pockets of tellurium and gray copper in a porphyry gangue; developed by a shaft twenty feet in depth.

**Julianna Lode Mining Company (The).**—Incorporated under the laws of Colorado, April 1881; capital stock $5,000,000, in 500,000 shares

of $10 each,non-assessable; office Rosita,Colo.; owns sixteen claims,including the Julianna, Boulder, Polaris, Horn-silver, A. A. Rowe, Julianna Rebecca, Connection, Jennie, Robert Lee, Flower, Stanislaus, J. C. M., Lizzie Mack, Denero, Intruder, Baltimore, and Ben. Franklin lodes, covering in all over 125 acres; situated in the Hardscrabble Mining district, one mile from Rosita; veins have defined walls, and in the Julianna a crevice four feet wide, containing argentiferous galena and copper pyrites in a baryta and quartz gangue; developed by a shaft 110 feet in depth; in the Boulder ten feet wide, containing gray copper in a baryta and quartz gangue, which mill-runs, when sorted, $10 per ton; in the Robert Lee walls are porphyry and granite, with a crevice five feet wide, containing hematite iron and carbonates carrying silver in a baryta gangue, which mill-runs, when sorted, from $25 to $65 in silver and $40 in gold per ton; developed by a shaft thirty-three feet in depth; in the Flower four feet wide, containing pockets of horn-silver in a baryta gangue, which assays $25 per ton; developed by a shaft fifteen feet in depth; in the Stanislaus the vein contains quartz carrying gold and silver, which mill-runs $17 per ton; in the J. C. M. the vein contains a pay streak two and one-half feet wide, with galena ore and a baryta gangue, which assays eleven ounces silver per ton; in the Lizzie Mack the vein contains a pay streak ten and one-half feet wide of quartz carrying gold, which assays $55 per ton; in the Denero the vein has porphyry and granite walls, and contains carbonates assaying $125 per ton, with a baryta gangue; developed by a sixty-foot shaft; in the Intruder the vein contains a galena ore, milling, when sorted from the baryta gangue, $6 per ton; in the Baltimore the vein contains iron pyrites assaying $90 per ton, with a baryta gangue; in the Polaris four feet wide, containing gold quartz and galena, which mill-runs $60 per ton, after sorting; developed by three shafts from thirty to sixty feet in depth; in the A. A. Rowe four and one half feet wide, containing gray copper and horn-silver in a baryta gangue; in the Julianna Rebecca four feet wide, containing galena, gray copper, and zinc blende, which assays $700 per ton, with a baryta gangue; in the Connection thirteen feet in width, containing quartz carrying gold and galena carrying silver, which mill-runs fifty-four per cent lead and $38 in gold and silver per ton; developed by a shaft ninety-three feet in depth; in the Jennie the vein contains spar carrying both gold and silver, which assays fifty per cent lead and $54 in gold and silver per ton; developed by a shaft forty-eight feet in depth; and also have in process of construction a reduction-works at Rosita, with an improved plant of machinery.

**Lady Franklin.**—J. W. Lawrence and others, Silver Cliff, owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, near Silver Cliff; located in 1878; the mineral-bearing zone is presumably a lead, the walls being fairly defined, averaging about twelve inches in width, and containing galena and copper in a gangue-matter of quartz and porphyry, milling, when sorted, from 50 to 200 ounces silver per ton; developed by three shafts, 90, 100, and 110 feet in depth, respectively.

**Latta Group.**—J. M. Latta & Co., Cañon City, Colo., owners; claims embrace 3000x300 feet; situated in Spring Gulch, Hardscrabble Mining district; located in 1883; veins have fairly defined walls, with crevices varying in width, and containing magnetic iron, with some gangue-matter; developed by four shafts from ten to twenty feet in depth each.

**Leavenworth.**—Burnham, Mathews & Baty, Philadelphia, Pa., owners; claim 1500x300 feet; situated on Robinson Hill, Hardscrabble Mining district, one-half mile from the town of Rosita; located in 1874, and patented; vein has walls fairly well defined, and may be a fissure, varying in width from eight to twelve feet, and containing a so-called pay streak from ten to twenty inches of gray copper and copper pyrites in a quartz and heavy spar gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developed by one main shaft 300 feet deep, other shafts aggregating about 100 feet, and 150 feet



of levels, with some stoping; improvements consisting of shaft and ore houses; output estimated at $150,000, and, with the exception of Humboldt and Pocahontas, the largest producer in the vicinity of Rosita.

**Leviathan.**—Benjamin Mattice and F. A. Reynolds, both Pueblo, owners; claim 350x750 feet; located in 1873, and patented; situated on Lucille Hill, one-half mile from Rosita; vein has fairly defined walls, and may be a fissure, varying in width from ten to twenty-five feet, and containing a so-called pay streak from one to six inches of gray copper in a gangue of quartz and baryta, milling, when sorted, from 50 to 100 ounces silver per ton; developed by one main shaft 125 feet in depth and two levels 50 and 100 feet in length, respectively, with some stoping; improvements—one shaft-house 20x30 feet; output estimated at $8,000 prior to 1881, but of late the property has been idle.

**Lone Star.**—William H. Mills, Ula, owner; claim 1500x300 feet; located in 1876; situated on Texas Creek, Sangre de Cristo Mining district, six miles from Ula; vein has defined walls, and may be a fissure, with a crevice from six to twelve feet in width, and a vein-matter of quartz and porphyry carrying copper pyrites, which mills, when sorted, from one to four ounces gold per ton; developed by a tunnel about fifty feet long, with some drifting; output to January, 1881, about $1,500, but of late the property has been idle.

**Lucille Consolidated Mining Company (The).**—Owns the Lucille Group, consisting of a number of claims 1500x300 feet each, the principal of which is the Lucille; all situated on Lucille Hill, Hardscrabble district, Rosita; vein in the Lucille has defined walls, with a crevice varying in width from three to six feet, and a pay streak from one to six inches containing galena and gray copper, milling, when sorted, from 50 to 250 ounces silver per ton, with a gangue-matter of quartz and baryta; developments—one main shaft over 100 feet deep, with other shafts, considerable drifting and stoping, and some surface improvements; output to January, 1881, estimated at about $12,000, since which time shipments have been made periodically.

**Mack and Mack.**—Owned by a stock company, of which B. C. Tellefer is president; W. D. Craig, treasurer; J. F. McBride, secretary; J. C. McBride, general manager; office Silver Cliff; claim 1500x300 feet; situated in the Hardscrabble Mining district, ten miles from Silver Cliff; located in 1881; vein has walls of porphyry and granite, with a crevice forty feet wide containing quartz and iron carbonates carrying both gold and silver, which assays from $250 to $1,000 per ton; developed by shaft 115 feet in depth.

**Melvin.**—H. Morrow, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in the Hardscrabble Mining district, near Silver Cliff; located in 1882; vein has defined walls, with a crevice two feet wide containing quartz carrying gold, which assays $30 in gold per ton; developed by shaft twenty-five feet in depth.

**Midnight.**—Briggs Bros., Querida, Colo., owners; claim 1300x300 feet; situated in the Hardscrabble Mining district, adjacent to the Bassick mine at Querida; located in 1880; in which the vein seems to have fairly defined walls, with a crevice varying in width from five to ten feet, containing argentiferous galena and zinc blende in a gangue-matter of calcareous quartz, which mills, when sorted, from 50 to 100 ounces silver per ton; developed by two shafts eighty and sixty feet in depth, respectively, and 100 feet of drifts, with some stoping.

**Nettie.**—W. H. Husband, Alfred Husband, and Wm. Spargo, all Rosita, Colo., owners; claim 1500x300 feet; situated on the north slope of Game Ridge, Hardscrabble Mining district, near Rosita; located in 1880; vein has defined walls, containing a pay streak two feet wide of silver chloride and horn-silver in a baryta and quartz gangue, which assays 684 ounces silver per ton; developed by two shafts thirty and forty feet in depth, respectively.

**Occident.**—M. D. Bowsman, John Loader, and Edward Russell, all Silver Cliff, Colo., owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, near Silver Cliff; located in 1881; vein has defined walls, with a crevice two feet wide containing quartz carrying gold and silver, which assays $50 per ton; developed by a shaft twenty-two feet in depth.

**Ocean Wave.**—George S. Bowen, Elgin, Ill., and J. Smith, Aurora, Ill., owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, six miles from Silver Cliff; located in 1878; vein has defined walls, with a pay streak eighteen inches wide containing galena and gray copper, which assays from 250 to 650 ounces silver per ton, with a baryta and quartz gangue; developed by a shaft 170 feet in depth.

**Plata Verde Mining Company (The).**—Incorporated under the laws of New York; owns the Plata Verde, 1500x300 feet; situated on the west slope of Round Mountain, one mile east of Silver Cliff, Hardscrabble district; located in July, 1878; ore—silver chlorides scattered through the porphyritic formation in pockets, milling, when sorted from the gangue-matter, from twenty-five to fifty ounces silver per ton, although small shipments have run as high as 500 ounces silver per ton; developed by an open cut forty feet long and forty feet wide; output to January 1, 1881, probably about $2,500, but of late the property has been idle.

**Pocahontas.**—Owned by A. C. Herr and H. C. Lehmans; offices Denver and Rosita, Colo.; claim 1385x300 feet; situated on Lucille Hill, within the town limits of Rosita, and located in 1874; in which the lead varies in width from ten to thirty feet, containing a so-called pay streak from six to eighteen inches of copper, iron, antimony, and sulphur, carrying silver and traces of gold, with a gangue-matter of baryta; milling, when sorted, from 50 to 200 ounces silver per ton; developments—one main double-compartment shaft 400 feet deep, other shafts aggregating 500 feet, and 2,000 feet of levels, with considerable stoping; improvements—shaft house 30x40 containing a thirty-horse-power engine, an air-compressor and steam pump, two large assorting-houses, two blacksmith-shops, boarding and dwelling houses, railroad track, and iron cars; output estimated at $400,000, with large ore reserves.

**Polonia.**—1200x300 feet; situated in Nebraska Gulch, one mile from Rosita, Hardscrabble district; located in 1874; vein has fairly defined walls, the width between which varies from three to six feet, containing a so-called pay streak from three to nine inches of gray copper and iron pyrites in a quartz and baryta gangue, milling, when sorted, from 25 to 100 ounces silver per ton; developed by two shafts 60 and 125 feet in depth, respectively, with some levels and drifts; output estimated at $40,000 prior to January 1, 1881, but the property has been idle for some time.

**Potts Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president and manager, H. C. Potts, Querida, Colo.; vice-president and treasurer, S. Cummings, Iowa; secretary, A. H. Carman, Colorado Springs, Colo.; office Querida, Colo.; owns the Solomon and Absalom lodes, 1500x300 feet each; situated in the Hardscrabble Mining district, near Silver Cliff, Colo.; vein has defined walls, with a crevice varying from one to twelve



feet in width, and containing pockets of tellurium and gray copper, which mill-runs, when sorted from the porphyry gangue, $30 per ton; developed by a shaft 155 feet in depth.

**Quaker City.**—James Fitzgerald, Thomas Morris, and others, Rosita, Colo., owners; claim 1500x300 feet; situated in Columbia Park, Hardscrabble Mining district, one-fourth mile from Bassick mine, at Querida; located in 1879; vein has somewhat defined walls, with a crevice four feet wide, containing grey and yellow copper and galena in a calcareous gangue, which mill-runs, when sorted, $30 per ton; developed by a shaft 110 feet in depth, and worked by a ten-horse-power engine.

**Racine Boy.**—(See Silver Cliff Mining and Milling Company.)

**Reaper City Mining Company (The).**—Incorporated under the laws of Colorado.; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; resident director and general manager, E. J. Haskell, Silver Cliff, Colo.; offices Rockford, Ills., and Silver Cliff, Colo.; owns a number of claims situated in the Hardscrabble Mining district, near Silver Cliff; located in January, 1882; veins have defined walls, with crevices from twelve to fifteen feet in width, containing chlorides, gray copper, and galena in a porphyry gangue; developed by a shaft 100 feet in depth.

**Red Cloud.**—J. C. McBride, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in Hardscrabble Mining district, eight miles from Silver Cliff, Colo.; located in 1882; vein has defined walls, with a crevice four and one-half feet wide, containing quartz and oxide of iron, assaying $37 per ton; developed by a shaft twenty feet in depth.

**Red Cross.**—E. C. Humphries & Co., Silver Cliff, Colo., owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, ten miles from Silver Cliff; located in 1882; vein has defined walls, with a crevice fifteen feet wide, containing galena in a quartz and porphyry gangue, assaying 130 ounces silver per ton.

**Relief.**—J. R. McCurry, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in the Hardscrabble Mining district, six miles from Silver Cliff; located in 1881; vein has porphyry and granite walls, with a crevice four feet wide, containing galena in a quartz and porphyry gangue, assaying 100 ounces silver per ton; developed by a shaft ninety-six feet in depth.

**Robinson Hill Consolidated Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, Paul Goerke, Rosita, Colo.; secretary, Samuel P. Dall, Cañon City; offices Rosita and Cañon City, Colo.; owns 600 feet of the Stephens lode and nine other claims, covering seventy acres; situated on Robinson Hill, Hardscrabble Mining district, one mile from Rosita; veins have defined walls, with crevices from four to fifty feet in width, and pay streaks from three inches to four feet of galena and gold quartz, which mill-runs, when sorted, from $50 to $75 per ton; developed by shafts, tunnels, and drifts aggregating 1,500 feet; output $15,000.

**Round Mountain Tunnel Group.**—Consisting of the above named tunnel site, 3000x6 feet, and two claims 1500x300 feet each, viz., Hidden Treasure and Jayhawker; situated on the north slope of Round Mountain, three-fourths mile east of Silver Cliff, Hardscrabble district; located October, 1879; owners Geo. W. Bittenbender, Telluride, Henry Stewart and G. D. Kinnear, both Silver Cliff; ore body is said to be a horizontal deposit twenty feet thick, containing pockets of chlorides in a porphyry gangue, which mills,

when sorted, from $15 to $20 per ton; developed by two tunnels, the first on the tunnel site 204 feet long, and the other eighty-three feet long, and two shafts eighteen and forty feet deep, respectively; output $8,000.

**Ruby.**—A. E. Hess, Rosita, Colo., owner; claim 1500x300; situated on Exchange Hill, Hardscrabble Mining district, two miles from Rosita; located in 1883; vein has defined walls, with a crevice three feet wide, containing galena and carbonates in pockets carrying silver, assaying $300 per ton, with a baryta gangue-rock; developed by a shaft twenty feet in depth.

**Sedgwick.**—S. C. Clark, Rosita, Colo., owner; claim 1500x300 feet; situated in Columbia Park, Hardscrabble Mining district, one and one-half miles from Rosita; located in 1878; vein has defined walls, with a crevice five feet wide, containing pockets of tellurium and sulphides of iron, which assays $244 per ton, with a baryta and quartz gangue; developed by a shaft 100 feet in depth.

**Seneca Tunnel and Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; president, J. M. Miller; secretary, F. A. Tuttle; treasurer, C. C. Smith; superintendent, C. H. Brewer—all Rosita, Colo.; office Rosita, Colo.; owns a tunnel claim 3,000 feet in length; situated on Robinson Hill, Hardscrabble Mining district; located in 1880; on which a tunnel is driven 350 feet long, cutting a number of veins with clearly defined walls, and crevices varying in width from ten to thirty inches, containing galena and gray copper, which mills twenty ounces silver per ton, when sorted from the baryta and quartz gangue.

**Silver Cliff.**—(See Silver Cliff Mining and Milling Company.)

**Silver Cliff Mining and Milling Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $10,000,000, in 100,000 shares of $100 each, non-assessable; president, James Keene, New York; owns the Racine Boy, Wet Mountain, and Silver Cliff, three patented claims, 300x1500 feet; situated on the north side of Wet Mountain Valley, and on the Silver Cliff Bluff, at Silver Cliff, Hardscrabble district; in which the formation is porphyry for a depth of at least 150 feet, disseminated through which appear chlorides and horn-silver, both in the free state and associated with the porphyry, which in the upper workings carries considerable manganese, and in the lower workings iron pyrites, the mineral permeating the entire formation, which mills, when sorted down about seventy-five per cent, from fifteen to twenty ounces silver per ton; developments consist largely of surface workings, somewhat resembling a quarry, with few shafts of any considerable depth; output prior to 1881 estimated at $375,000, but of late the property has been idle; and two stamp-mills, containing forty Stamps each, with amalgamating-pans and settlers, adjoining the mines, one of which was built by Fraser & Chalmers, Chicago—both of which are idle.

**Silver Run Tunnel Mining Company (The).**—Incorporated under the laws of Illinois; capital stock $100,000; president, Thomas Butterworth; vice-president, George S. Haskell; secretary and treasurer, Alfred P. Wells—all Rockford, Ill.; superintendent and general manager, E. J. Haskell, Silver Cliff, Colo.; office Rockford, Ill., and Silver Cliff, Colo.; owns a tunnel site 3,000 feet in length; situated at Silver Run, Hardscrabble Mining district, six miles from Silver Cliff; located in 1879; on which a tunnel is driven 480 feet in length, cutting a number of veins on which claims have been located 1500x300 feet each, the principal of which has a crevice about twenty feet wide, with defined walls, and a so-called pay streak from one and one-half to three and one-half feet in width of quartz carrying free gold and carbonates, milling, when sorted, from $50 to $100 per ton in silver and gold; improvements—a complete plant of Ingersoll Rock Drills, with the necessary buildings, and presumably facilities to ship fifty tons per day.



**Summit.**—R. Payne, Louis Tein, and M. Oatman, all Rosita, Colo., owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, one mile from Rosita, Colo.; located in 1875; vein has defined walls and a crevice four and one-half feet wide, with a pay streak from two to four inches of gray and yellow copper, brittle silver, and zinc blende, which assays from 100 to 800 ounces silver per ton, in a quartz and baryta gangue; developed by a shaft 140 feet in depth.

**Sunset.**—J. E. Palmer and J. T. Cooper, both Rosita, Colo., owners; claim 1500x300 feet; situated on Robinson Hill, Hardscrabble Mining district, near Rosita; located in 1877; vein has defined walls and a pay streak about twelve inches wide, containing gold quartz and galena, which mill runs, when sorted, twelve and one-half ounces gold and fifty-three ounces silver per ton; developed by a shaft 120 feet in depth.

**Sunset.**—J. C. and J. F. McBride, both Silver Cliff, Colo., owners; claim 1500x300 feet; situated in the Hardscrabble Mining district, near Silver Cliff; located in 1880; vein has somewhat defined walls, with a crevice four feet wide containing a galena ore, assaying seventy-three ounces silver per ton, with a porphyry gangue; developed by five shafts from ten to thirty-seven feet in depth.

**Sunset Mining and Milling Company (The).**—Incorporated under the laws of Colorado; office 16 *Times* Building, Chicago, Ill., superintendent, Anthony Barker, Rosita, Colo.; owns the Sunset and Wash Talia lodes, 1500x300 feet each; situated on Mineral Mountain, Hardscrabble Mining district, one mile from Rosita; veins have defined walls with two crevices in the Wash Talia twenty-five feet apart and parallel, the larger one four feet wide, with one pay streak from three to five inches, and in the Sunset the vein is about the same width, the mineral in both being galena in a baryta gangue, which assays from $50 to $115 per ton; Sunset is developed by a shaft 125 feet in depth, and Wash Talia by a shaft thirty-two feet in depth and a tunnel 110 feet long.

**Thames River.**—W. J. Prisk and Geo. P. Detdering, both Silver Cliff, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, one and one-half miles from Silver Cliff; located in 1878; vein has defined walls containing galena and carbonates in a porphyry gangue, assaying fifty ounces silver per ton; developed by three shafts, one thirty-five feet in depth and two thirty feet each in depth.

**Twenty-Six.**—Owned by Paul Goerke and F. Schmit, both Rosita; claim 1100x300 feet; located in 1874, and situated in Nebraska Gulch, Hardscrabble Mining district, one mile from Rosita; vein has defined walls, the crevice varying in width from three to six feet, and the pay streak from four to twelve inches, containing iron and copper pyrites and gray copper in a quartz and baryta gangue, milling, when sorted, from $25 to $100 per ton; developments—one main shaft over 100 feet deep with considerable levels and stoping and some surface improvements; output to January, 1881, is estimated at $2,000, since which time it has been making some shipments at intervals.

**Ula Mining and Reduction Company (The).**—Incorporated January 13, 1879; capital stock $300,000, in 3,000 shares of $100 each, non-assessable; offices Denver and Silver Cliff; owns the Alma, Old Colony, Norwich, Crystal, Quartz, Haxtun, New York, Olive Branch, Hahn's Peak,

Sayre, Denver City, and Nevada, 1500x300 feet each, and covering over ninety acres of surface ground; situated near Silver Cliff, Hardscrabble district, and located subsequent to July, 1878; the developments consisting of one shaft on each claim from ten to sixty feet in depth, nearly all of which show more or less mineral, appearing usually in the form of pockets varying both in quantity and quality.

**Uncas.**—E. O. Hyde, E. B. Barnes, H. E. Garlock, W. H. Smith, all Silver Cliff, owners; claim 1500x300 feet; situated on Bear Mountain, Hardscrabble Mining district, near Silver Cliff; located in 1883; vein has somewhat defined walls and a crevice three feet wide containing quartz carrying gold, which assays $93 per ton; developed by a tunnel 100 feet in length

**Vanderbilt.**—J. W. Lawrence, Silver Cliff, Colo., owner; claim 1500x300 feet; situated in Hardscrabble Mining district, three-fourths of a mile from Silver Cliff; located in 1879; vein has defined walls, with a crevice thirty feet wide, containing pockets of silver chlorides, milling, when sorted, $14 per ton; developed by a shaft forty feet in depth.

**Venguweld.**—E. C. Bassick, John A. Stipe, and E. T. Ashley, all Silver Cliff, Colo., owners; claim 1500x300 feet; situated on the Sangre de Cristo Range, Verde Mining district; located in 1880; vein is said to be a fissure, containing gold quartz and gray copper, assaying as high as 1,700 ounces silver per ton; developed by a shaft 300 feet in depth, a tunnel 180 feet in length, and 180 feet of drifts; worked by a twenty-horse-power engine.

**Victoria.**—J. A. Melvin, Rosita, owner; claim 1500x300 feet; located in 1874; situated on Lucille Hill, Hardscrabble Mining district, near the limits of Rosita; containing a lead with fairly defined walls, varying from ten to fifteen feet in width, pay streak from four to ten inches of gray copper and some native silver in a quartz and baryta gangue, milling, when sorted, from twenty to thirty ounces silver per ton; developments—two shafts sixty and thirty feet deep, respectively, and a level sixty feet long.

**Victoria Mining Company (The).**—Incorporated under the laws of Colorado in 1882; agent, H. H. Daniels, Rosita, Colo.; owns the Victoria lode, 1500x300 feet; situated in the Hardscrabble Mining district, near Rosita; containing a lead with fairly defined walls, and a pay streak varying in width from two to three feet of gray copper with a considerable percentage of brittle silver in a gangue-matter of quartz and baryta, milling, when sorted, from 10 to 1,100 ounces silver per ton; the developments consisting of a shaft 82 feet deep and a tunnel 700 feet long.

**Virginia Mining Company (The).**—Incorporated under the laws of Colorado, March 30, 1876; capital stock $60,000, in 600 shares of $100 each, non-assessable; president, Mayland Cuthbert; vice-president, R. N. Clarke; secretary and treasurer, Thomas C. Parrish; office Rosita, Colo.; owns the Virginia lode, 1300x300 feet; situated in Hardscrabble Mining district, about one and one-half miles from Rosita; located in 1873; vein has fairly defined walls, between which the width varies from one and one-half to three feet, containing a pay streak from six to twelve inches of gray copper and copper pyrites in a quartz and paryta gangue, milling, when sorted, from 50 to 125 ounces silver per ton; developments—one main shaft 400 feet in depth, five other shafts aggregating 161 feet, and a tunnel 140 feet long, cutting the vein at a depth of 185 feet, with nearly 1,000 feet of levels, and some stoping; improvements—one shaft-house 40x85 feet, containing an engine, boiler, and two pumps; output probably $10,000 prior to 1881, but the property has been idle for some time.



**Young Lion.**—A. E. Hess and C. C. Smith, both Rosita, Colo., owners; claim 1500x300 feet; situated in Hardscrabble Mining district, six miles from Silver Cliff; located in 1877; containing a lead, with a crevice four feet wide; ore—argentiferous galena in a quartz gangue, assaying fifty-four ounces silver per ton; developed by a shaft sixty feet in depth.



# Dolores County.

This County was created by a division of Ouray, in 1880, and has an area of 950 square miles, with an estimated population of 4,000. In it there is but one mining district—the Pioneer—and Rico is the county seat and chief town, but it is the center of great possibilities. Its isolation from the railways, ore markets, and supply depots—Silverton being the nearest point—and the intervening ranges of mountains, have retarded the development of its splendid mineral resources, but the people are moving vigorously and unitedly for relief, and it is not improbable that the D. & R. G. R'y will, during the current year, afford them the desired connection.

The formation in which the mines are located is principally sandstone and lime-rock, much broken and disturbed by numerous dikes and overflows of the eruptive rocks, the mineral lying in contacts between these stratifications and in fissures penetrating or cutting up through them from below the contacts. The ores consist of the argentiferous sulphides, carbonates, and oxides of lead, iron, zinc, copper, and sometimes bismuth, having an average value of about $100 per ton, when sorted, as indicated by assays and returns of shipments to the smelters. A number of the mines have made several consignments of fairly high-grade mineral, and others are in a condition to do likewise, but are awaiting cheaper and more direct transportation, as the existing rates consume too much of the gross valuation. Distributed throughout the district are many excellent prospects, which only require the encouragement of favorable markets to render them both profitable and productive; and when these are supplied, Dolores County will become one of the most prosperous sections of the San Juan. At Rico there are at present located three establishments for the reduction and treatment of ores.

**Ætna and Bertha S.**—Two claims 300x1500 feet each; situated on the south side of Silver Creek, two and one-half miles from Rico, Pioneer Mining district; located in May, 1880; owners Henry Schwenk, Rico, Geo. N. Bute, Pueblo, and Conrad Walbrach, Denver; vein a fissure thirty-six inches wide of lead carbonates and yellow copper in a quartz gangue, which mills, when sorted, thirty per cent lead and fifty ounces silver per ton; developed by two tunnels 35 and 100 feet long, respectively, with a shaft twenty-seven feet from the end of the former.

**Ah Joyey.**—Claim 300x1500 feet; situated on the west slope of Nigger Baby Hill, one-half mile north of Rico, Pioneer Mining district; located in October, 1879; owners D. F. Taylor, Joseph Hensel, Wm. Orton, and C. F. Lane, all Rico; vein a fissure thirty inches wide, pay streak five inches of galena in a quartz gangue, which assays sixteen per cent lead and forty ounces silver per ton; developed by one tunnel 228 feet long.



**Alleghany.**—Claim 300x1500 feet; situated on the north slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer Mining district; located in 1880, and patented March, 1883; owners T. L. Davis and B. F. Waggoner, both Rico, and T. B. Townsend, Montrose; attorney, F. C. Bishop, Rico; vein a fissure forty inches wide, containing galena, iron and copper pyrites, with some manganese, in quartz, which mills, when sorted, thirty per cent lead, twenty per cent iron, and forty ounces silver per ton; developed by two open cuts twenty feet long each, one shaft fourteen feet deep, and one tunnel fifteen feet long, extending into the Leila Davis 106 feet, both claims being on the same vein.

**Alma Mater No. 1 and No. 2.**—Two claims 300x250 and 300x1200 feet, respectively; situated on the south slope of Nigger Baby Hill, one mile north-east of Rico, Pioneer Mining district; located in June, 1879; owners A. Parsell, Henry Hammon, C. H. Rawles, C. P. Nutter, and Louis King, all Ouray, S. M. Ransom, Rico, Thos. F. Mason, New York City, and others; vein a fissure from eighteen to sixty inches wide, pay streak from five to twenty-five inches of galena, manganese, and oxide of iron in a quartz gangue, which mills, when sorted, from twenty to twenty five ounces silver per ton; developed by one shaft eighty feet deep and two drifts from shaft fifty and sixty feet long, respectively, on No. 1, and three open cuts, with ten-foot faces each, on No 2; output 225 tons.

**Amanda J and Gold King.**—Two claims 300x1500 feet each; situated on the west slope of Telescope Mountain, one and one-half miles north-east of Rico, Pioneer district; located January, 1881; owners C. J. Bang, Oliver Miller, and the estate of J. Thomas, all Rico; veins both fissures forty and twenty-four inches wide, respectively, with pay streaks fifteen and five inches wide each of black manganese and galena in a quartz gangue, which assays twenty-five ounces silver per ton; developed by two shafts seventy-six and twenty-seven feet deep, respectively.

**Annie Proctor.**—300x1500 feet; situated on the south slope of Telescope Mountain, one and one-half miles north-east of Rico, Pioneer district; located October, 1882; owners Hill Floersch and J. N. Bogart, both Rico; vein a fissure, twelve inches wide containing lead carbonates with some gangue, on which a sample assay showed twenty-six ounces silver per ton; developed by one thirty-five foot shaft and one fifteen foot face open-cut.

**Arctic Mining Company (The).**—Incorporated under the laws of Illinois, in 1880; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, F. E. Morse, secretary, Fredk. Ullman, treasurer, Nelson Thomason, all Chicago, Ill.; managers, Cahn Bros., Rico; offices 85 Washington street, Chicago, and Rico; owns Arctic Cliff and Little African; three claims 300x1500 feet each; situated on the east slope of Nigger Baby Hill, one mile north-east of Rico, Pioneer district; located October, 1879; veins all fissures, containing quartz carrying galena, which assays twenty-two ounces silver per ton; developed by three shafts, one on each claim, which show fairly.

**Argenta.**—300x1500 feet; situated on the east slope of Expectation Mountain, three-fourths mile west of Rico, Pioneer district; located January, 1882; owners Gus. Misch, Wm. H. Dawson, and Wm. Sherrey, all Rico; vein a fissure five feet wide, pay streak fifteen inches of copper and manganese in quartz, which assays sixty ounces silver per ton; developed by one twenty-seven-foot shaft.

**Aspen.**—300x1500 feet; situated on the south side of the West Dolores River, eight miles north-west of Rico, Pioneer district; located June, 1882;

owner F. J. Walker, Rico; vein a fissure four feet wide, pay streak from ten to twelve inches of tellurium in a petzite, which assays at the grass-roots one-half ounce gold and twenty ounces silver per ton; developed by four open cuts with ten-foot faces each.

**Australia.**—300x1500 feet; situated on the west slope of Telescope Mountain, two miles north-east of Rico, Pioneer district; located January, 1881; owners Josiah Spurlock, Joseph Hensel, and L. Phillippi, all Rico; vein a fissure five feet wide, pay streak thirty inches of lead and iron carbonates in a quartz gangue, which assays $20 per ton; developed by one twenty-foot shaft.

**Avalanche.**—300x1500 feet; situated on the south slope of Telescope Mountain, one and one-half miles north-east of Rico, Pioneer district; located August, 1881; owners L. V. Rosser, Rico, Robert Dunlap, Denver, and A. M. Friend, Brighton, Iowa; vein a fissure six feet wide, pay streak six inches of iron pyrites and some galena in a quartz gangue, which assays twenty-one ounces silver per ton; developed by two shafts fifty and seventy-eight feet in depth, respectively, with a six-foot cross-cut from the bottom of the latter.

**B. F. Butler.**—300x1500 feet; situated on the south slope of Nigger Baby Hill, one-half mile north-east of Rico, Pioneer district; located June, 1880; owners N. J. Bradley, W. E. and C. H. Steele, all Rico; vein a fissure forty inches wide, pay streak ten inches of galena and manganese in a quartz gangue, which assays twenty-five ounces silver per ton; developed by a thirty-five-foot shaft and a fifteen-foot drift from bottom of shaft.

**Bancroft.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located July, 1879; owners Gus Misch, Simon Ransom, A. K. Brescott, and Jno. Eder, all Rico; vein a horizontal contact, with sandstone and lime walls four feet thick, in which appear streaks of galena and carbonates from ten to twenty-five inches in thickness, which mills, when sorted, twenty-five per cent lead and from ten to twenty-five ounces silver per ton; developed by one sixty-foot shaft, one incline seventy feet deep, and one cross-cut 100 feet long.

**Bellaire.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile east of Rico, Pioneer district; located July, 1879; owners O. P. Ghrist and F. M. Medley, both Rico, and Walter Evans, Ames; vein a fissure nine feet wide, pay streak from sixteen to twenty inches of heavy spar, carrying gold and silver, which assays $25 per ton; developed by two tunnels eighteen feet long each.

**Belle of Rico.**—300x1500 feet; situated on the east slope of Expectation Mountain, one mile west of Rico, Pioneer district; located February, 1880; owner B. E. Ladd, Jr., Rico; vein a fissure three feet wide, pay streak six inches of galena and sand carbonates, which assays twenty per cent lead and thirty ounces silver per ton, with some gangue; developed by one twenty-foot tunnel.

**Belzora.**—300x1410 feet; situated on the north side of Horse Gulch, three miles north-west of Rico, Pioneer district; located August, 1879; owners J. E. Ault, J. B. Menard, and Geo. Sanborn, all Rico; vein a fissure twenty-five feet wide, pay streak six inches of amtimonial silver in mispickel, which mills, when sorted, from $150 to $175 per ton in gold and silver, adjoining which is four feet of lime quartz, which mills eleven ounces silver per ton; developed by one drift 114 feet long, at end of which is a twenty-eight-foot



cross-cut, at end of which last is a room 10x10 feet and eight foot high, one tunnel nineteen feet long, designed to cut vein 176 feet deep, and one shaft seventeen feet deep.

**Black Bear.**—300x1500 feet; situated on the west slope of Mount Elliot, six and one-half miles north-west of Rico, Pioneer district; located September, 1880; owners Geo. Merton and Frank Hill, both Rico; vein a fissure six feet wide, containing pockets of sulphurets, oxide of copper and gray copper, which assays ninety ounces silver and two ounces gold per ton, with a quartz gangue; developed by two tunnels 119 and 88 feet long, respectively; there is also a horizontal deposit in this claim from three to fifteen feet thick which assays well both in silver and copper.

**Black Demon.**—300x1500 feet; situated on north-east slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located July, 1879, and patented 1882; owners Wm. May, Dolores post-office, La Plata County, and Durant da Ponte, New Orleans; vein a fissure forty inches wide, pay streak twenty-four inches of black oxide of manganese ore and hydrated oxide of iron, with manganese, spar, and quartz, which mill-runs, when sorted, fifty-five ounces silver per ton; developed by two tunnels seventy and 140 feet long, respectively, and two open cuts with fifteen-foot faces each; output fifty tons, and it is estimated that over $200,000 worth of ore is now in sight.

**Black Diamond Coal Mines.**—280 acres; situated on the west side of the Dolores River, Pioneer district; located in 1880 and in process of patent; owners J. P. Norton and Julius Thompson, both Rico; containing a stratum twenty-eight inches thick of bituminous coal cropping out on the river bank for one-fourth of a mile, and classified as No. 1 fuel and coking coal; developed by two openings on the vein ten and twenty feet long, respectively.

**Black Diamond and Little Rochester.**—Two claims 300x1500 feet each; situated on the north slope of Mount Elliott, two and one-half miles north-west of Rico, Pioneer district; located in 1879; owner W. W. Parshall, Rico; vein in the former a fissure seven feet wide, pay streak eighteen inches of lead carbonates and manganese in a quartz gangue, which assays $40 per ton; developed by one twenty-foot tunnel, and one eighteen-foot shaft.

**Black George.**—300x1500 feet; situated on the west slope of Dolores Mountain, three-fourths of a mile south-east of Rico, Pioneer district; located in 1878; owners W. W. Stoddard and A. G. Siddons, both Ouray, and L. C. McClure, Elgin, Illinois; vein a fissure five feet wide, pay streak from ten to fifteen inches of lead carbonates in a decomposed gangue, which assays fifty ounces silver and one ounce gold per ton; developed by one tunnel sixty-five feet long.

**Black Hawk.**—300x1500 feet; situated on the north slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located May, 1878, and in process of patent; owners Jno. Glasgow, R. C. Darling, and E. A. Robinson, all Rico; vein a fissure thirteen feet wide, containing galena, iron, and copper pyrites and some zinc in a quartz gangue, which mills, when sorted, twenty ounces silver per ton; developed by six tunnels from twenty-five to forty-five feet in length and one fifteen foot shaft; output 250 tons; there are four other veins on this claim from three to nine feet in width, one of which has a twenty-inch pay streak of carbonates in quartz, assaying sixty ounces silver per ton.

**Black Hawk No. 2.**—300x1500 feet; situated in Deadwood Gulch, one mile south-west of Rico, Pioneer district; located September, 1879; owners J. W. Winkfield and Josiah Spurlock, both Rico, and D. J. Shaw, Durango; vein a horizontal contact, with sandstone and lime rock walls sixteen feet thick, containing pockets of lead, carbonates, and sulphurets, which assays from fifty to seventy-five ounces silver per ton, with a quartz gangue; developed by two tunnels 72 and 109 feet long, respectively.

**Blue Jay.**—300x1500 feet; situated on the east side of the Dolores River, two miles north of Rico, Pioneer district; located April, 1879; owners W. H. Sockrider, Rico, and Burr Culver, Dallas; vein a fissure seven feet wide, containing iron and carbonates in quartz carrying gold, which assays one-half ounce gold and fifteen ounces silver per ton, with a decomposed gangue; developed by two tunnels eighty and fifty feet long, respectively.

**Bob Drennon.**—300x1500 feet; situated on the north-west slope of Telescope Mountain, two miles north of Rico, Pioneer district; located July, 1881; owners R. H. Drennon and Emil Werk, both Kansas City; E. P. Suydam, Denver, and Chas. N. Roe, Durango; ore-body appears to be a deposit forty feet thick, containing iron and lead carbonates in a decomposed gangue, which assays fifteen per cent lead and fourteen ounces silver per ton; developed by one shaft fifty feet deep.

**Bog Iron.**—300x1500 feet; situated on the west slope of Mount Elliot, six and one-half miles north-west of Rico, Pioneer district; located in 1882; owners Geo. Merton and Frank Hill, both Rico; vein a fissure sixty-five inches wide, containing pockets of sulphurets, black oxide of copper and gray copper, which assay twenty-five ounces silver per ton, with a quartz gangue; developed by one twenty-seven-foot tunnel.

**Boston Group.**—Three claims 300x1500 feet each, viz., Boston, Morning Glory, and Bonanza Queen; situated on the west slope of Mount Elliot, six and one-half miles north-west of Rico, Pioneer district; located in January, 1882; owners Henry Schwenk, J. J. Cohnan, and Frank Vogely, all Rico; veins are probably fissures from five to six feet wide, containing pockets of sulphurets, oxide of copper and gray copper, which assays twenty-five ounces silver per ton, with a quartz gangue; developed by three tunnels thirty, twenty-five, and twenty feet long, respectively.

**Brown.**—(See Lucy P. Brown).

**Bull of the Woods.**—300x1500 feet; situated in Horse Gulch, three miles north-west of Rico, Pioneer district; located in 1880; owners F. Roys, A. E. Arms, and Lee Cuttle, all Rico; vein a fissure containing two pay streaks, aggregating eight inches in width, of galena in a quartz gangue, which assays $30 per ton; these ore bodies appearing in the seventy-five-foot tunnel, designed to cut the main vein 100 feet deep, the vein itself being three feet wide, and composed of mineralized quartz.

**Burwick.**—300x1500 feet; situated on the east slope of Expectation Mountain, one mile west of Rico, Pioneer district; located January, 1883; owners Franc O. Wood, Colorado Springs, and W. B. Sheivley, Rico; vein a fissure three feet wide, containing quartz carrying gold and silver, assaying fifteen ounces silver per ton; developed by one twenty-foot tunnel.

**Butler.**—(See B. F. Butler.)

**C. H. C.**—300x1500 feet; situated on the north-west slope of Telescope Mountain, one mile and a half north of Rico, Pioneer district; located July, 1879, and patented March, 1883; owners C. H. Carpenter, Rico, and A. P. Adams, Albany, N. Y.; vein a contact four feet wide, pay streak from six to nine inches, the mineral near the surface being galena and lead carbonates, and lower down sulphurets in a quartz gangue, which assays from 150 to 200 ounces silver per ton, and the entire vein is more or less mineralized; developed by one shaft 100 feet deep, with two drifts running therefrom, fifteen and six feet long, respectively, and one cross-cut sixty feet long.



**Campbell.**—(See Clan Campbell.)

**Camp-bird.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile south-east of Rico, Pioneer district; located November, 1880; owners A. A. Waggoner and A. D. DeMasters, both Rico, and August Krille, Trinidad; ore body appears to be a deposit; developements—one shaft 212 feet deep, designed to strike the Newman contact at a considerable depth, showing at depth of 140 feet, fifteen feet of galena in a quartz gangue, which assays from twenty to twenty-five ounces silver per ton.

**Carbonate.**—300x1500 feet; situated on the north-west extremity of Dolores Mountain, one mile east of Rico, Pioneer Mining district; located in August, 1879; owners A. A. Waggoner, A. D. De Masters, and Geo. S. Barlow, all Rico; vein a fissure from six to seventy-five inches in width, containing galena, carbonates, and sulphurets in a quartz and decomposed gangue, which mills, when sorted, fifty per cent lead and forty-two ounces silver per ton; developed by two tunnels 125 and 90 feet long, respectively; output about forty tons.

**Carbonate Queen.**—(See Don Pedro and Carbonate Queen.)

**Cashier.**—(See Sinbad Group.)

**Cashier.**—300x1500 feet; situated on the west side of the divide between the east and west Dolores Rivers, seven miles north-west of Rico, Pioneer Mining district; located in January, 1881; owners F. W. Reed and Richard Pohl, both Rico, and A. P. Adams, Albany, N. Y.; vein a fissure sixteen inches wide, pay streak ten inches, containing gold and silver bearing quartz, which assays $25 per ton; developed by one thirty-foot tunnel.

**Catalpa.**—(See Merrimac and Catalpa.)

**Chelsea.**—300x1500 feet; situated on the south slope of Mount Elliot, two and one-half miles north-west of Rico, Pioneer Mining district; located in January, 1883; owners Hill Floersch and Frank and Andrew Davis, all Rico; vein a fissure five feet wide, pay streak fourteen inches, containing lime quartz, carrying gold and silver, which assays $45 per ton; developed by one tunnel forty feet long.

**Clan Campbell.**—300x1500 feet; situated on the west slope of Telescope Mountain, one mile north of Rico, Pioneer Mining district; located in September, 1878; owners Julius Thompson, Henry Williams, Nathan Cahn, Geo. W. Porter, D. J. McCarthy and A. H. Mundee, all Rico; vein a fissure twenty inches wide, containing galena and some gray copper, assaying twenty ounces silver per ton, with an abundant gangue; developed by a fifty-foot tunnel and a forty-foot shaft from end of tunnel.

**Colorado Boy.**—(See Silver Heels and Colorado Boy.)

**Contact.**—300x1500 feet; situated on the north slope of Dolores Mountain, two and one-half miles east of Rico, Pioneer Mining district; located in 1880; owners H. Bartholomew and J. W. Randel, both Durango, Henry Lemons, T. M. Circle, and James Dempster, all Rico, and —— Kellogg

and others, Dunlap, Ia.; vein a fissure five feet wide, containing black sulphurets in a quartz gangue, which assays from fifteen to twenty ounces silver per ton; developed by one tunnel fifty-seven feet long.

**Corsair.**—300x1500 feet; situated on the east side of the divide between the east and west Dolores Rivers, west of north from Rico, Pioneer district; located October, 1882; owners Oscar H. Taylor, Thomas Waggonsler, and C. F. Lane, all Rico; vein a fissure four feet wide, pay streak twelve inches, containing oxide of copper in a quartz gangue, with pockets of chlorides, which mills, when sorted, $80 per ton; developed by one thirty-six-foot shaft.

**D. and R. G.**—300x1500 feet; situated on the east slope of Expectation Mountain, one fourth mile west of Rico, Pioneer district; located January, 1882; owners U. S. and L. D. Waggoner, and Thomas Radigan, all Rico; vein a fissure fifteen feet wide, containing quartz carrying oxide of copper, and native copper in pockets, assaying from twenty-five to fifty per cent copper; developed by one twenty-foot tunnel.

**D. K. D.**—300x1500 feet; situated on the north slope of Expectation Mountain, two and one-half miles north-west of Rico, Pioneer district; owners W. W. Parshall and D. K. Dunkle, both Rico; vein a fissure seven feet wide, containing quartz, carrying iron and copper pyrites; developed by one fifty-foot shaft.

**D. P.**—300x1500 feet; situated on the north slope of Dolores Mountain, one and one-fourth miles east of Rico, Pioneer district; located in May, 1882; owner J. J. Brown, Rico; vein a fissure thirty inches wide, pay streak seven inches of galena and copper pyrites in a quartz gangue, which assays 100 ounces silver per ton; developed by one tunnel twenty-two feet long.

**Denver.**—300x1500 feet; situated on the east slope of Expectation Mountain, three-fourth mile west of Rico, Pioneer district; located in June, 1881; owners Frank O. Wood, Colorado Springs, and W. B. Sheivley, Rico; vein a fissure three feet wide, containing quartz carrying manganese and copper carbonates, assaying fifteen ounces silver per ton; developed by one twenty-eight-foot shaft.

**Diamond.**—300x1500 feet; situated on the south fork of Horse Gulch, four miles north-west of Rico, Pioneer district; located May, 1880; owners J. W. Winkfield, Rico, H. A. Barraclough, Albuquerque, N. M., and Lorenzo Kellogg, Dunlap, Ia.; vein a fissure five feet wide, pay streak thirty-five inches of chlorides and gray copper in a quartz gangue, which mills, when sorted, $22 per ton; developed by one tunnel forty-five feet long and one shaft 110 feet deep.

**Ditchfield.**—300x1500 feet; situated on the west side of Marguerita Basin, two and one-half miles north of Rico, Pioneer district; located July 1881; owners Moses Noland, Rico, and Geo. Ditchfield and S. B. Gamble, both Colorado Springs, and Adam Lawder, Durango; vein a fissure seven feet wide, containing quartz carrying galena and black manganese in streaks, which assays one-half ounce gold and thirty ounces silver per ton; developed by one twenty-five-foot shaft and one ninety-two-foot tunnel designed to cut vein 120 feet deep.

**Dolores Placer Mining Company (The).**—Unincorporated; president, Geo. Ferguson; secretary and treasurer, G. W. Henry—both Lake City; manager, Hesse Musgrave, Rico; owns the Dolores Placer, 123 acres; situated on the Dolores River, three-fourths of a mile south of Rico, Pioneer district; patented in April, 1881; developments—500 feet of ditching, two shafts twenty and thirty feet deep, and some flumming; improvements—two buildings.



**Dolores Silver Mining Company (The).**—Incorporated under the laws of Colorado in August, 1882; capital stock $7,000, in 700 shares of $10 each, non assessable; president, P. T. Swain, St. Louis; vice-president, ————; secretary and treasurer, ————; general manager, H. G. Thomas, Denver; superintendent, R. C. Darling, Rico; office 8 La Veta Place, Denver, and Rico; owns the Atlantic Cable, 300x1500 feet; situated in town of Rico, Pioneer district; located May, 1878, and patented March, 1883; vein a horizontal contact about twenty-two feet thick, containing galena, copper, and iron pyrites, and zinc in a quartz gangue, which mill, when sorted, from fifteen to twenty per cent lead, and sixteen ounces silver per ton; developed by three shafts twenty-eight, nine, and ten feet deep, respectively.

**Dolores Valley Mining Company (The).**—Incorporated under the laws of New York in December, 1880; capital stock $2,000,000, in 20,000 shares of $10 each, non-assessable; president and managing director, C. O. French; vice-president, J. L. Mott; secretary and treasurer, Edwin Ernstein—all New York City; offices 19 Park Place, New York, and Rico, Colo.; owns Mariquita, Milan, Florence, Confidence, Excelsior, New Discovery, Little Corporal, Summit, and Squigee, nine claims, 300x1500 feet, each; situated on the south-east slope of Expectation Mountain, one mile from Rico, Pioneer district; located in 1880, and patented in 1883; veins all fissures, from one to five feet wide, pay streaks from four to fourteen inches of galena, lead carbonates, iron and copper pyrites, and manganese in a quartz gangue, which assays from 25 to 100 ounces silver per ton; developments—five shafts from twelve to eighty feet deep, each, one forty-foot adit, one sixteen-foot incline shaft, one fifty-four-foot drift, and one fourteen-foot face open cut; Maple, African, Fortune, and Shakespeare, 300x1500 feet each; situated in Burnett Gulch, one and one-half miles south-west of Rico, Pioneer district, located in 1880; veins all contacts, with sand-stone and lime walls, containing porphyry, carbonates, galena, and iron; developments—four drifts about thirty-five feet long, each; C. B. & Q., S. B. W., and Cashier, 300x1500 feet, each; situated in Horse Gulch, three miles north-west of Rico, Pioneer district; located in March 1880, and the first patented in 1883; veins all fissures, from twelve to twenty-four inches wide, pay streaks from five to fifteen inches of galena, iron and copper pyrites, and sulphurets of silver in a quartz gangue, which mills, when sorted, from $25 to $50 per ton; developments—three shafts, 16, 25, and 109 feet deep, respectively, with ninety-five feet of drifting; Zulu, Peru, Little Giant, Jenny Lind, Mountain Monarch, Stony Point, Atlanta, and Vampire, 300 x1500 feet each; situated on the south slope of Telescope Mountain, one and three-fourths miles north-east of Rico, Pioneer ditsrict; located in 1879 and 1880; veins all fissures from ten to thirty inches wide, containing pockets of galena, iron and copper pyrites, and manganese, with a quartz gangue, which assays from twenty to thirty ounces silver per ton; developments—eight adits from forty-five to seventy feet in length, and one cross-cut 196 feet long; La Plata, Dolores, Peak, and Cliff, 300x1500 feet each; situated on the south slope of Dolores Mountain, one mile from Rico, Pioneer district; located in 1879 and 1880; veins all contacts, with sand stone and lime-rock walls, containing quartz which carries gold and silver; developments—one eighteen-foot drift, and two twenty-two-foot shafts; and also a large number of other claims within a radius of four miles from Rico, Pioneer district, on which the company is doing devlopment work.

**Don Pedro and Carbonate Queen.**—Two claims on the same vein, 300x1500 feet each; situated on the west slope of Dolores Mountain, three-fourths mile east of Rico, Pioneer district; located April, 1880; owners

Chas. N. Roe, Durango, Wm. Story and A. G. Siddons, both Ouray; (Ed. Pisko, Denver, is an owner in the latter); vein a fissure four feet wide, pay streak from fifteen to twenty inches of lead carbonates, manganese, and oxide of iron, which mills, when sorted from the decomposed gangue, forty ounces silver per ton; developed, respectively, by a fifty-five-foot incline and a sixty-foot tunnel.

**Dutchman.**—300x1500 feet; situated on the north side of Horse Gulch, two miles north-west of Rico, Pioneer district; located June, 1880; owners F. W. Gove and S. Enfield, both Rico, and Jno. Thomas, Leadville; vein a fissure three feet wide, pay streak sixteen inches of gold and silver bearing quartz, which assays $65 per ton; developed by two tunnels twenty and fifty-two feet long, respectively, with one fifteen-foot shaft from the end of the former.

**Eclipse.**—300x1500 feet; situated on the south side of Horse Gulch, three miles north west of Rico, Pioneer district; located September, 1880; owners B. F. Kenrick and Patrick Murray, both Rico; vein a fissure four feet wide, pay streak twenty inches containing quartz carrying gold and silver, which assays $24 per ton; developed by one seventy-five-foot tunnel and one eight-foot shaft.

**Eclipse.**—300x1500 feet; situated on the east side of the Dolores River, two and one-half miles north of Rico, Pioneer district; located August, 1879; owners D. A. McGraw, Rico, T. B. Townsend, Montrose, and D. B. Davendorf, Delavan, Wis.; vein a fissure four feet wide, pay streak six inches of galena in a quartz gangue, which assays twenty per cent lead and forty ounces silver per ton, adjoining which is twelve inches of porphyry gouge carrying more or less mineral; developed by one tunnel fifty feet long.

**Edith D.**—300x1500 feet; situated on the east slope of Expectation Mountain, one and one-half miles west of Rico, Pioneer district; located January, 1882; owners W. B. Whiteside, Jos. N. Bogart, and F. Roys, all Rico; vein a fissure forty inches wide, containing manganese and iron in a quartz gangue, which assays ten ounces silver and one ounce gold per ton; developed by one tunnel fifty feet long.

**Ella Bear.**—300x1500 feet; situated on the west slope of the divide, between the East and West Dolores Rivers, Pioneer district; located July, 1882; owners W. B. Whiteside, M. Moran, and D. C. Patterson, all Rico; vein a fissure five feet wide, containing lime-spar carrying gold and silver, which assays an average of three-fourths ounce gold and fifteen ounces silver per ton; developed by one ten-foot open-cut.

**Ella D.**—(See Richmond, Albany and Ella D.)

**Eliza Jane.**—300x1500 feet; situated on the north-west slope of Dolores Mountain, two miles east of Rico, Pioneer district; located in June, 1880; owners B. F. Klee and T. Radigan, both Rico, and the Hildebrand Mining Company; vein a fissure six feet wide, pay streak twenty-four inches, containing oxide of iron, in a carbonate of lime gangue, which assays thirty ounces silver per ton; developed by two tunnels forty and seventy feet long respectively.

**Emerald.**—(See Roderick Dhu and Emerald.)

**Ethlena.**—300x1500 feet; situated on the north-west slope of Telescope Mountain, one mile and a half north of Rico, Pioneer district; located August, 1879; owners M. S. Corbett, Ouray; Mrs. L. C. Brainard, Buffalo, N. Y.; and L. V. Rosser, Rico; ore-body seems to be a horizontal deposit thirty



inches thick, containing pockets of galena and lead carbonates, appearing at irregular intervals, which assays thirty per cent lead, and thirty-five ounces silver per ton, with a decomposed gangue-matter; developed by one fifty-five-foot tunnel, and one fifteen-foot face open-cut.

**Eureka No. 2.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile south-east of Rico, Pioneer district; located July, 1882; owners Henry Rudolph and Frank Lindsay, both Rico; vein a fissure six feet wide, containing six inches of quartz carrying galena, which assays ten ounces silver per ton; developed by one tunnel twenty feet long.

**Expectation.**—300x1500 feet; situated on the west slope of Expectation Mountain, one mile south of Rico, Pioneer district; located in April, 1882; owner B. F. Kenrick, Rico; vein a fissure thirty inches wide, containing quartz carrying gold and silver, which assays from $10 to $14 per ton; developed by one twenty-foot tunnel.

**Fair Valley.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in January, 1882; owners W. B. Whiteside, and Joseph N. Bogart, both Rico; vein a fissure thirty inches wide, containing galena in a quartz gangue, on which a sample assay showed seventeen ounces silver per ton; developed by one twenty-foot drift.

**Falcon.**—300x1500 feet; situated at the head of Iron Gulch, one and one-fourth miles north-east of Rico, Pioneer Mining district; located in January, 1882; owners Geo. Gilbert, D. A. McGraw, and J. W. Burns, all Rico; vein a fissure four feet wide, pay streak twenty-four inches, containing galena in a quartz gangue, which assays twenty-five ounces silver per ton; developed by one forty-foot drift and one ten-foot cross-cut tunnel.

**Falcon.**—300x1500 feet; situated on the south-east slope of Nigger Baby Hill, at Rico, Pioneer Mining district; located in August, 1879; owner C. H. Carpenter, Rico; vein a fissure twenty-five feet wide, containing quartz carrying galena, copper and iron pyrites, and zinc, which assays twenty ounces silver per ton; developed by one forty-six foot open-cut and one twenty-six-foot tunnel.

**Fickle Goddess.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer Mining district; located in June, 1881; owners Henry Schwenk and Charles King, both Rico; vein a fissure from thirty to thirty-six inches wide, pay streak twenty-four inches, containing lead carbonates in a decomposed gangue, which mills, when sorted, sixty ounces silver per ton; developed by one twenty-eight-foot tunnel.

**Flagstaff.**—300x1500 feet; situated on the west side of the divide between east and west Dolores Rivers, Pioneer Mining district; located in January, 1882; owner James Sutherland, Rico; vein a fissure six feet wide, pay streak fifteen inches containing carbonates, which assays thirty ounces silver per ton, with a decomposed gangue; developed by one twenty-five-foot drift.

**Flying Fish.**—300x1500 feet; situated on the south side of Horse Gulch, three miles north-west of Rico, Pioneer Mining district; located in September, 1879; owners Louis Walden, Trout Lake, and Rudolph Urig, Rico; vein a fissure ten feet wide, containing gold and silver bearing quartz, assaying two ounces gold and forty ounces silver per ton; developed by one 220-foot tunnel and one 60-foot shaft.

**Fort Wayne.**- 300x1500 feet; situated on the north slope of Dolores Mountain, one and one-fourth miles east of Rico, Pioneer Mining district; located in 1882; owners Geo. Geogline, Rico, and Joseph Setz, Durango; vein a fissure six feet wide, containing galena and copper in a quartz gangue, which mills twenty-two ounces silver per ton; developed by one tunnel 100 feet long.

**Franklin.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile south-east of Rico, Pioneer district; located in May, 1882; owners Geo. Hayes and C. H. Byfield, both Rico; vein a fissure thirty inches wide, containing two pay streaks, one on each wall, five inches wide each, of galena and iron carbonates in a quartz gangue, which assays thirty-five ounces silver per ton; developed by two tunnels sixty-seven and twenty-seven feet long, respectively, with a seventeen-foot shaft from end of the latter.

**Garfield.**—300x1500 feet; situated on the south side of Horse Gulch, one and one-half miles north-west of Rico, Pioneer district; located in 1879; owners R. J. Gibson and F. E. Brown, both Rico, and C. F. Eagle, Denver; vein a fissure twelve feet wide, pay streak twenty inches, containing sulphurets of silver with some manganese and chlorides in a quartz gangue, on which one mill-run of sorted ore showed 208 ounces silver and $150 in gold per ton; developments—one tunnel 200 feet long, cutting vein at depth of 150 feet, on which there is six feet of drifting.

**Gem of Beauty.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-fourth mile west of Rico, Pioneer district; located in 1879, and patented in 1882; owners H. B. Adsit, Wm. J. Mulholland, and H. O. Montague, all Silverton; vein a fissure six feet wide, pay streak ten inches, containing sulphurtes, which mills fifty ounces silver per ton, when sorted from the gangue-matter; developed by a tunnel fifty feet long.

**General McPherson.**—300x1500 feet; situated on the south-west slope of Dolores Mountain, one mile south-west of Rico, Pioneer district; located October, 1880; owners J. W. Winkfield, B. F. Klee, and J. W. Park, all Rico, and J. Q. A. Norton, Lawrence, Kas.; vein a horizontal contact with sandstone and lime-rock walls fifteen feet thick, containing pockets of lead carbonates and sulphurets in a decomposed gangue, which assays twenty-five ounces silver per ton; developed by one shaft 122 feet deep.

**Golden Eagle.**—300x1500 feet; situated at the west base of Lone Cone Mountain, thirteen miles north-west of Rico, Pioneer district; located August, 1882; owner Jno. A. McLean, Pandora; vein a fissure eight feet wide, containing quartz carrying gold and silver, which assays $20 per ton; developed by one fifteen-foot shaft.

**Golden Fleece.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-third mile east of Rico, Pioneer district; located April, 1880; owners R. H. Drennon and Emil Werk, both Kansas City, E. P. Suydam, Denver, and Chris. Wichman, Durango; vein a fissure from fifteen to thirty-six inches wide, containing galena and carbonates, which mills from forty to sixty per cent lead and from fifteen to forty ounces silver per ton, when sorted from the decomposed gangue; developed by one fifty-foot shaft.

**Good Hope.**—300x1500 feet; situated on Silver Creek, two miles from Rico, Pioneer district; located 1882; owners Chas. Cooley, Jno. McGuire, and Jno. Eder, all Rico; vein a contact eighteen inches wide, containing narrow streaks of galena and carbonates, with a decomposed gangue, which assays twenty per cent lead and thirty-five ounces silver per ton; developments—two ten-foot open cuts and one cross-cut 100 feet long.



**Governor.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-fourth miles north of Rico, Pioneer district; located 1879; owners Josiah Spurlock and W. K. Smith, both Rico, J. O. Gill and W. S. Horne, both Ouray, F. W. Pitkin, Pueblo; vein a fissure eight feet wide, containing quartz carrying lead and iron carbonates in pockets and streaks, which assays an average of ten ounces silver per ton; developed by three shafts, forty-seven, forty, and twelve feet deep, respectively, and one incline forty feet deep.

**Governor Crapo.**—300x1500 feet; situated on the north-west slope of Dolores Mountain, one mile south-east of Rico, Pioneer district; located June, 1879; owners F. G. Burnett and J. R. Peroier, both Ouray, T. B. Townsend, Montrose; vein a fissure four feet wide, containing carbonates in a decomposed gangue, which assays seven ounces silver per ton; developed by one thirty-foot tunnel.

**Grand View Mining and Smelting Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, Thompson Dean; vice-president, L. M. Lawson; secretary and treasurer, C. F. Dean—all New York City; manager, J. C. Grierson; metallurgist, H. J. Hardress - both Rico; office 63 Drexel Building, New York, and Rico, Colo.; owns the Grand View, Major, Phœnix, Yellow Jacket, and Pelican, five claims, 300x1500 feet each; situated on the south slope of Telescope Mountain, one-half mile north-east of Rico, Pioneer district; located 1879, patented 1881; veins all fissures from four inches to fourteen feet in width, and probably averaging thirty inches in width, containing oxides in the higher workings and sulphurets in the lower workings, which mill, when sorted from the quartz gangue, from ten to fifteen per cent lead and about forty ounces silver per ton; in the Grand View the pay streak varies from fifteen to twenty inches in width, with an ore mainly of iron oxides, black manganese, and lead carbonates, milling, when sorted, over fifty ounces silver per ton, the ore being valuable on account of the percentage of iron which it contains; the Phœnix and Yellow Jacket are adjoining locations on the same vein, containing a pay streak from twelve to twenty inches wide, with a mineral similar to that in the Grand View, except that it carries an addition of copper pyrites and more lead in the form of galena—the ores from this lead being very suitable for concentration; developed by one shaft 160 feet deep, with two drifts running from the shaft 60 and 160 feet long, respectively, and four levels, 350, 400, 100, and 330 feet long, respectively, with connecting shafts and winzes aggregating 750 feet; improvements—1,500 feet of tramway, ore-bins with a capacity of 250 tons; the Aztec 300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile north-west of Rico, Pioneer district; located 1879, and patented 1881; vein a fissure twelve feet wide, pay streak forty inches containing galena and zinc blende, with a quartz gangue, which mills, when sorted, twenty ounces silver per ton; developed by two levels 100 feet long each.

Elliott.—300x1500 feet; situated at Rico, Pioneer district; located 1879; developed by one twenty-five-foot shaft and one thirty foot tunnel, and eighty acres of coal land, situated on the west side of the Dolores River seven miles north of Rico, Pioneer district; containing one stratum of bituminous coal twenty inches thick; developments—one entry 150 feet long, with connecting drifts, and a wagon road one mile and a half long to the Company's coke-ovens, four in number, capacity six tons per day; situated on the Dolores River; output of mine 2,500 tons of coal.

Also owns a smelter, built by Fraser & Chalmers, Chicago; situated on the Columbia Mill-site, adjoining the town of Rico, and containing two blast-furnaces fifteen and thirty tons capacity, respectively; Blake Crusher, Cornish Rolls, Automatic Sampler, capacity fifty tons per day (twenty-four hours);

two Roasters, capacity ten tons per day; Baker Blower, engine and boilers; adjoining which is a concentrator containing ten Stamps, three Jigs, and one Billinger Table, capacity twenty-five tons per day (twenty-four hours), and has been turning out seventeen bars of bullion since Decemebr 24, 1882, prior which to date the average was ten tons per day.

**Greek and Roman.**—Two claims on the same vein 300x1500 feet each; situated on the south-west slope of Telescope Mountain, three miles north-east of Rico, Pioneer district; located September, 1879; owners Alfred A. Hord, Cleveland, Ohio, A. D. Cleghorn, Del Norte, and T. R. Grigsby, and S. C. Grant, both Rico; vein a fissure two feet wide, containing oxides and sulphurets in a quartz gangue, which mills, when sorted, 200 ounces silver per ton; developed by two shafts thirty-five and fifteen feet deep, respectively.

**Gunshot.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-fourth miles north of Rico, Pioneer district; located in June, 1881, and in process of patent; owners A. P. Adams, Albany, N. Y., Frank W. Handy, Cincinnati, O., and C. N. Cox, Denver; vein a fissure twenty feet wide, containing pockets of iron oxides, manganese, and galena, with a quartz gangue, which assays twenty ounces silver and one-half ounce gold per ton; developed by one ninety-foot tunnel and one eighty-five foot shaft from end of tunnel.

**Guthrie.**—300x1500 feet; situated on the west slope of Dolores Mountain, one mile east of Rico, Pioneer district; located in 1879; owners S. Enfield and James Tucker, both Rico, and John Thomas, Leadville; vein a fissure two feet wide, containing spar carrying manganese, which assays seventeen ounces silver per ton; developed by one tunnel 105 feet long.

**Harvey.**—(See Uncle Ned and Harvey.)

**Hawkeye State.**—Claim 300x1500 feet; situated on the east slope of Mount Elliot, two and one half miles north of Rico, Pioneer Mining district; located in January, 1880; owner J. A. McJunkin, Rico; vein a fissure five feet wide, pay streak twenty-four inches of black iron and galena in a quartz gangue, which assays fifty ounces silver per ton; developed by 190 feet of tunneling.

**Heavy Spar Group.**—Five claims 300x1500 feet each, viz.: Heavy Spar, Badger, Martha J., Mountain Cross, and Glass-eyed Charley; situated in Horse Gulch, two and one-half miles north-west of Rico, Pioneer Mining district; located in 1880 and 1881; owners H. E. Snyder & Sons, Rico (James Watson, Lawrence, Kansas, is an owner in the Heavy Spar); veins all fissures about four feet wide each, containing quartz carrying gold and silver, which assays fifteen ounces silver and one-half ounce gold per ton; developed by three shafts, sixty, twenty-five, and fifteen feet in depth, respectively, and two tunnels eighty-four and fifty feet long, respectively.

**Hermosa Mining Association (The).**—Incorporated under the laws of Colorado in June, 1880; capital stock $100,000, in 1,000 shares of $100 each; president, Geo. M. Munger; vice-president, Chas. H. Morse; secretary and treasurer, P. F. Munger; office 1347 Wabash Avenue, Chicago, and also at Rico; owns fourteen claims, 300x1500 feet each, viz.: Harriet—vein a fissure twenty-four inches wide, containing quartz, with arsenical sulphide of iron and copper, which mills, when sorted, about one-half ounce gold and twenty-five ounces silver per ton; Silver King—vein a fissure four feet wide of decomposed quartz, containing pockets of black oxide of manganese, which mills, when sorted, eighteen ounces silver per ton; Brother Jonathan and Sunset—vein a fissure six feet wide of decomposed quartz and spar, carrying sulphurets and black copper oxides; and eight other claims, all within a radius of six and one-half miles of Rico, Pioneer Mining district, and each having from 30 to 300 feet of development-work, some of which are patented.



**Highland Mary.**—(See Tuf Nut and Highland Mary.)

**Hildebrand Silver Mining Company (The.)**—Incorporated under the laws of Indiana, in February, 1883; capital stock $300,000 in 6,000 shares of $50 each, non-assessable; president, P. M. Hildebrand; vice-president, Geo. B. Wright; treasurer, W. H. Thomas; secretary, L. G. Hays—all Indianapolis; owns one-half of Eliza Jane (see Eliza Jane), Stonewall, Bald Eagle, Lone Jack, Hardscrabble, White Iron, and Lucky Boy, 300 x1500 feet each; situated on the north slope of Dolores Mountain, from one to two miles east of Rico, Pioneer Mining district; located in 1879 and 1880; veins all fissures from one to six feet wide, pay streaks from four to twelve inches of gold and silver bearing quartz, carrying some galena, which assays from $5 to $50 per ton, with a quartz gangue; developed by three tunnels, 100, 50, and 25 feet long respectively, and two shafts thirty and sixteen feet deep, respectively.

**Hog Back and Laclede.**—Two claims 300x1500 feet each; situated on the west slope of Expectation Mountain, one and one-fourth miles south-west of Rico, Pioneer district; located July, 1879; vein a fissure four feet wide, pay streak seven inches of galena and yellow carbonates, with a decomposed gangue, which mills, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developments—three tunnels, ninety, seventy-five, and thirty feet long, respectively, and two shafts twenty-five and fifty feet deep, respectively; owners Wm. Dwyer, Telluride, T. E. Breckenridge & Sons, Silverton, and the Hermosa Mining Association.

**Hot Springs.**—300x1500 feet; situated on the east side of the West Dolores River, eight miles north-west of Rico, Pioneer district; located in 1880; owners H. F. Bushey, H. Dunton, and F. Wakeman, all Rico; vein a fissure three feet wide, containing quartz carrying galena in pockets and chimneys, which assays twenty per cent lead and twenty-five ounces silver per ton; developed by an open cut with a ten-foot face. There is a hot spring of superior curative properties on this property.

**Idaho.**—300x1500 feet; situated on the east slope of Mount Elliot, one mile north of Rico, Pioneer district; located in March, 1880; owners S. H. Burghardt and F. R. Lewis, both Rico, and D. A. Cook, Ottawa, Ill.; vein a fissure forty inches wide, pay streak ten inches containing galena, which assays fifty-five per cent lead and twenty-one ounces silver per ton, with a quartz gangue; developed by one seventy-five-foot tunnel and one open cut and tunnel twenty-five feet long.

**Illinois.**—300x1500 feet; situated on the south-west slope of Telescope Mountain, one and one-half miles north-east of Rico, Pioneer district; located in June, 1882; owners David Evans, Hugh Scott, and Thos. Denning, all Rico; vein a fissure four feet wide, pay streak fourteen inches of galena in a quartz gangue, which assays eighteen ounces silver per ton; developed by one shaft fifteen feet deep.

**Invincible.**—300x1500 feet; situated on the west slope of Mount Elliot, six and one-half miles north-west of Rico, Pioneer district; located July, 1882; owners Geo. Merton, J. J. Cohnan, and Frank Vogley, all Rico;

vein a fissure five feet wide, containing pockets of sulphurets, oxide of copper, and gray copper, which assays forty ounces silver per ton, with a quartz gangue; developed by one tunnel twenty-five feet long.

**Iron and Comstock.**—Two claims, 300x1500 feet each; situated at the south-west base of Lone Cone, eighteen miles north-west of Rico, Pioneer district; located June, 1882; owners H. D. McGillvray and F. D. Margowski, both Telluride; vein a contact, with porphyry and slate walls thirty-five feet wide, containing a black iron ore, which assays $30 per ton in gold; developed by one twenty-five-foot shaft and one fifteen foot-tunnel.

**Iron-Clad.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-fourth mile west of Rico, Pioneer district; located in 1879, and patented in 1883; owner Durant da Ponte, New Orleans, and others; vein a fissure thirty inches wide, pay streak fourteen inches of copper pyrites in a quartz gangue, which mills, when sorted, $30 per ton; developed by two tunnels fifty and thirty-five feet long, respectively, and three open cuts, with ten-foot faces each.

**Iron Vault.**—300x1500 feet; situated at the west base of Telescope Mountain, Pioneer district; relocated in 1881; owners J. P. Shriver and J. H. Ross, both Rico; developments—one twenty-five-foot shaft, uncovering a mineral body seven feet below the surface, and at a depth of twenty-five feet is not yet cut through, the latter appearing to be a deposit similar to that of other claims in the same vicinity.

**Isabel.**—300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile east of Rico, Pioneer district; located in August, 1879; owners Chas. N. Roe and Jacob Summa, both Durango, and August Krille, Trinidad, Colo.; vein a fissure, from fifteen to thirty-six inches wide, containing galena and carbonates in a decomposed gangue, which mills, when sorted, from forty to sixty per cent lead and from fifteen to forty ounces silver per ton; developed by two shafts twenty and sixty-five feet deep, respectively, and a sixteen-foot drift running from the latter.

**Jersey Belle and Sonica.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north side of Silver Creek, two miles east of Rico, Pioneer district; located in August, 1879; vein a fissure four feet wide, containing galena and iron in a quartz gangue, which assays twenty-five ounces silver per ton; developed by one sixty-foot tunnel and one thirty-five-foot shaft.

**Jewel Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in January, 1881; capital stock $2,000,000, in 20,000 shares of $100 each, non-assessable; president, Wm. H. Abel; vice-president, J. W. Smith; secretary and treasurer, W. R. McNiven—all Buffalo, N. Y.; manager, W. W. Parshall, Rico; office 14 West Seneca street, Buffalo, and Rico; owns the Pappoose, 300x1500 feet; situated on the north slope of Mount Elliot, two and one-half miles north-west of Rico, Pioneer district; located July, 1879; vein is a perpendicular contact, with sand stone and lime-rock walls six feet wide, pay streak from three to four feet, containing native silver, sulphurets of silver, and some manganese in a quartz gangue, which mills, when sorted, ninety ounces silver on the first-class ore and forty-five ounces silver on the second-class ore; developed by one thirty-foot tunnel and one sixty-foot shaft from end of tunnel; and the King of the Needles and Mystery (see San Miguel County).

**John B.**—(See Stephen B. and John B.)



**Johnny Bull Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, T. M. Patterson, Denver; vice-president, Antony Boaro, Rico; secretary, V. D. Markham, Denver; treasurer, August Krille, Trinidad; office 380 Lawrence Street, Denver; owns the Johnny Bull mine 300x1500 feet; situated on the divide between the east and west Dolores Rivers, six and one-half miles north-west of Rico, Pioneer district; located June, 1880; vein a fissure averaging forty inches in width, dipping a little, and containing pockets of sulphuret-ore carrying black oxide of copper and gray copper in a quartz gangue, which mills, when sorted, twenty per cent copper, 30 ounces silver, and two ounces gold, or about $95 per ton; adjoining which for a distance of twenty-five feet from the surface is a body of decomposed yellow quartz, about two feet wide, carrying considerable gold, sometimes as high as five ounces per ton, in addition to forty ounces silver; developed by two shafts 80 and 120 feet deep respectively, a tunnel 226 feet long, cutting the bottom of the latter, at which point there is a room 13x18 feet in size, and from which run two drifts 105 an 30 feet long, respectively; output about 200 tons, or enough to pay all the expenses of development.

**Juniata.**—300x1500 feet; situated on the north slope of Dolores Mountain, one-half mile east of Rico, Pioneer district; located January, 1882; owners Joel Winn, Geo. R. Long, Frank Stalford, and Chas. Deutcher, all Rico; vein a fissure thirty inches wide, containing quartz carrying galena and iron pyrites in streaks, probably aggregating five inches in width, and assaying from ten to twenty ounces silver per ton; developed by one tunnel thirty feet long.

**K. P.**—300x1500 feet; situated on the south side of Horse Gulch, two miles north-west of Rico, Pioneer district; located June, 1881; owner J. J. Brown; vein a fissure seventy-five inches wide, containing fifty inches of mineralized quartz, which assays fourteen per cent copper and ten ounces silver per ton; developed by one tunnel twenty-five feet long.

**Kalamazoo.**—300x1500 feet; situated on the north side of Horse Gulch, three miles north-west of Rico, Pioneer district; located May, 1880; owners Geo. Sanborn and J. E. Ault, both Rico; vein a fissure ten feet wide, pay streak six inches containing antimonial silver in mispickel, which assays from 20 to 150 ounces silver per ton; developed by one shaft twenty-six feet deep.

**Keystone.**—(See Parole Group.)

**Keystone.**—300x1500 feet; situated on the east slope of Expectation Mountain, about one mile from Rico, Pioneer district; vein a contact, with sandstone and lime-rock walls about forty inches wide, pay streak from eighteen to twenty-four inches, containing galena and carbonates, assaying from ten to twenty ounces silver per ton, with a decomposed gangue.

**Keystone No. II.**—300x1200 feet; situated on the south slope of Telescope Mountain, three-fourths of a mile north-east of Rico, Pioneer district; located in October, 1879; owners J. F. Wannemaker and Geo. B. Foster, both Rico, and Wm. Munn, Ouray; vein a fissure, containing fourteen inches of galena in a quartz gangue, which assays eighteen per cent lead and thirty-five ounces silver per ton; developed by one shaft forty feet deep and one drift fifty feet long.

**Kingston Boy Group.**—Four claims, 300x1500 feet each; situated on the east slope of Expectation Mountain, at the head of Iron Gulch, one and one-fourth miles west of Rico, Pioneer district, viz.: Kingston Boy,

Lady Jane Grey, Mary Stuart, and Annie Burr; veins all fissures, in the first twenty inches wide, pay streak ten inches containing carbonates, with a considerable gangue, which assays eleven ounces silver per ton; developed by one tunnel sixty feet long, and on each of the other claims open cuts with fifteen-foot faces each; owners Cahn Bros., Rico.

**Laclede.**—(See Hog Back and Laclede.)

**Lady Wilson, Lady Ethelyn, and Composite.**—Three claims, 300x1500 feet each; situated on the south side of the West Dolores River, eight miles north-west of Rico, Pioneer district; located in October, 1881; owners Chas. A. Wheeler, Ouray, C. R. Clark, Red Mountain Town, Sam'l T. Fisher, Canton, Mass., and James Tidd, Grafton, Mass.; veins all fissures from two to four feet wide, pay streaks about eighteen inches, containing iron and copper pyrites, with lead carbonates and a decomposed gangue matter, which assays forty per cent lead and fifteen ounces silver per ton; developed by three tunnels thirty feet long each.

**Leila Davis.**—(See Rico Passadena Mining Company.)

**Liberty.**—300x1500 feet; situated on the south-east slope of Expectation Mountain, one-half mile south-west of Rico, Pioneer district; located in October, 1879; owners Buenemann Bros., Ouray, and Perry Terpenning, Red Mountain Town; vein a horizontal contact five feet thick, pay streak about nine inches, containing lead carbonates, which assays twenty-two ounces silver per ton, with a decomposed gangue; developed by one fifty-foot tunnel.

**Lilliputian Queen.**—300x1500 feet; situated on the north slope of Dolores Mountain, one and one-fourth miles east of Rico, Pioneer district; located in January, 1883; owners Franc O. Wood, Colorado Springs, and W. B. Sheivley, Rico; vein a fissure, containing quartz carrying gold and silver, which assays fifteen ounces silver per ton.

**Limestone.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-half miles north of Rico, Pioneer district; located in April, 1879; owner Dr. J. P. Landon, Rico; vein a fissure four feet wide, containing carbonates (principally iron) in a decomposed gangue, which assays from five to forty ounces silver per ton; developed by a tunnel sixty-five feet long and an open cut forty feet long, with a twenty-two-foot face.

**Little Emma and Center Group.**—Five claims, 300x1500 feet each, viz.: Little Emma, Center, Annie Bell, Little Ula, and Little Wink; situated on the West Dolores River, eight miles north-west of Rico, Pioneer district; the first two located in 1880 and the last three in 1883; owners estate of Teofilo Durand (H. Dunton, administrator), Sanborn McFarland, and J. A. Gilmore, all Rico; veins all fissures; in the Little Emma, Annie Bell, and Little Ula, three feet wide, pay streak five inches of sulphurets, chlorides, ruby silver, and silver glance in a quartz gangue, which mills, when sorted, $175 per ton, and in the Center and Little Wink ten feet wide, containing pockets of copper and iron pyrites, and some wire-silver and galena, which mills, when sorted, $90 per ton; developed by three tunnels, 100, 55, and 22 feet long, respectively, and five open cuts, with faces from ten to eighteen feet each.

**Little Joe.**—300x1500 feet; situated on Nigger Baby Hill, above the Grand View Smelter, Pioneer district; owners E. L. Davis and Geo. E. Blake, both Rico; vein a fissure about ten inches wide, containing quartz carrying copper pyrites, which assays from $25 to $100 per ton; developed by a tunnel 105 feet long, which, when extended, will cut a number of veins and some surface workings.



**Little Laura.**—300x1500 feet; situated on the west slope of Telescope Mountain, Pioneer district; developments—one twenty-six-foot shaft and one forty-foot tunnel, showing a body of galena from ten to thirty inches wide, with a decomposed gangue.

**Little Leadville.**—300x1500 feet; situated on Nigger Baby Hill, adjoining Rico, Pioneer district; located in September, 1879; owners Buenemann Bros., Ouray, Perry Terpenning, Red Mountain Town, and two others, Rico; vein a horizontal contact three feet thick, pay streak fourteen inches of lead carbonates, which assays twenty-four ounces silver per ton, with a decomposed gangue; developed by two shafts twenty-five feet deep each.

**Little Maggie.**—300x1500 feet; situated on the north-west slope of Dolores Mountain, one mile east of Rico, Pioneer district; located in 1878, and patented in 1883; owners H. L. Scott and J. R. Crooke, both Denver; vein a fissure, from three to eight feet wide, pay streak from six to sixty inches of carbonates in a decomposed gangue, which mills, when sorted, thirty per cent lead and forty ounces silver per ton; developed by one shaft 100 feet deep, with four drifts from shaft, fifty, forty-five, thirty, and fifteen feet long, respectively, one level 280 feet long on vein, and one cross-cut sixty feet long, with considerable stoping; output about 400 tons.

**Little Maud.**—300x1500 feet; situated on the north side of Horse Gulch, three miles north-west of Rico, Pioneer district; located in May, 1881; owners Chas. S. Kelly and J. A. Adams, both Rico, and Jos. Wilkin, Durango; vein a fissure four feet wide, containing from twenty-four to thirty inches of quartz carrying gold and silver, which assays twenty-five ounces silver and trace of gold per ton; developed by one twenty-six-foot tunnel.

**Little Pittsburgh.**—300x1500 feet; situated on the north side of Silver Creek, two miles east of Rico, Pioneer district; located in September, 1879; owners Dr. W. W. Ashley and A. G. Dunbar, both Ouray; vein a fissure five feet wide, pay streak five inches of quartz carrying silver and brittle silver, assaying from fifty to seventy-five ounces silver per ton; developed by one forty-foot shaft and one fifteen-foot tunnel.

**Little Queen.**—300x1500 feet; situated on the south-west slope of Nigger Baby Hill, at Rico, Pioneer district; located in July, 1879; owners J. E. Lacome and Jno. Thomas, both Rico, and C. L. Creek, Durango; vein a fissure six feet wide, pay streak ten inches, containing lead and iron carbonates in a decomposed gangue, which assays twenty ounces silver per ton; developed by one shaft thirty-six feet deep.

**Little Rico.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-fourth mile west of Rico, Pioneer district; located in 1879; owners J. D. Rollins, Silverton, and others; vein a fissure, pay streak from four to six inches of galena in a quartz gangue, which assays fifteen per cent lead and forty ounces silver per ton; developed by one thirty-foot shaft

**Little Rochester.**—300x1500 feet; situated on the east slope of Mount Elliot, one mile north-west of Rico, Pioneer district; located in March, 1880; owners T. Steudeman, Rico, and A. M. Friend, Brighton, Ia.; vein a fissure forty inches wide, pay streak ten inches, containing manganese and iron oxides in a quartz gangue, which assays from twenty to sixty ounces silver per ton; developed by one tunnel forty-two feet long.

**Little Sadie.**—300x1500 feet; situated on Mount Elliot, Pioneer district; vein a fissure four feet wide, between walls, pay streak twenty inches, assaying from 25 to 200 ounces silver per ton; developed by three tunnels, exposing the vein for a vertical distance of 250 feet.

**Little Wink.**—300x1500 feet; situated in Horse Gulch, four miles north-west of Rico, Pioneer district; located 1880; owners D. J. Shaw, Durango, J. W. Winkfield, Rico, and others; vein a fissure three and one-half feet wide, containing pockets and streaks of carbonate ore, with a decomposed gangue; developments—one fifteen-foot shaft and one ten-foot tunnel.

**Lucky Boy.**—300x1500 feet; situated on the north-west slope of Dolores Mountain, three miles east of Rico, Pioneer district; located June, 1880; owners J. W. Winkfield, B. F. Klee, and Jno. Cravens, all Rico; vein a fissure five feet wide, pay streak twenty-four inches of chlorides and sulphurets, which assays one ounce gold and thirty-six ounces silver per ton, with a quartz gangue; developed by one tunnel forty feet long and one shaft fifteen feet deep.

**Lucky Boy.**—Owners A. L. Rapalee, T. R. Grigsby, and David Swickhamer, all Rico; claim 300x1500 feet; situated on the south fork of Horse Gulch, two miles north-west of Rico, Pioneer district; located January, 1882; vein a fissure twenty feet wide, pay streak from six to eight inches of galena in a quartz gangue, which assays $100 per ton in gold and silver; developments—a tunnel thirty feet long on the vein.

**Lucy P. Brown.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-fourth mile west of Rico, Pioneer district; located May, 1880; owners Hill Floersch and H. C. Brown, both Rico; vein a fissure forty inches wide, pay streak fourteen inches, containing galena in a quartz gangue, which assays forty ounces silver per ton; developed by one tunnel fifty feet long.

**Mable Gray.**—300x1500 feet; situated on the east slope of Dolores Mountain, one mile from Rico, Pioneer district; owners E. L. Davis and A. Reed, both Rico, and D. A. Cook, Ottawa, Ill.; vein a fissure from thirty to forty inches wide, containing sulphurets and copper pyrites in a quartz gangue, assaying from $25 to $75 per ton; developed by a tunnel forty feet long and some surface workings.

**Maggie, School Girl, and Sawyer.**—Three adjoining claims on the same vein, 300x1500 feet each; situated on the crest of Telescope Mountain, two and one-half miles north-east of Rico, Pioneer district; the first located in 1880 and the two last in 1882; owners J. A. McJunkin and Mrs. E. A. Dickinson, both Rico; vein a fissure eight feet wide, containing quartz carrying gold and silver, which mills, when sorted, $35 per ton; developed by three shafts ten feet deep each and one tunnel thirty-five feet long, cutting the vein in the Maggie thirty feet deep.

**Marion Mining Association.**—Manager, L. D. Ratliff, Marion, Ind.; owns Silver Pick, Achaen, and C. Bottom, three claims, 300x1500 feet each; situated on the south-west slope of Mount Wilson, ten miles north of Rico, Pioneer district; located June, 1882; veins are fissures from two to three feet wide, pay streaks from eight to twelve inches of iron and copper pyrites and some galena in a quartz gangue, on which one mill-run of sorted ore showed ten ounces gold and thirty ounces silver per ton, although it would not average near so much; developed by three open cuts, with ten-foot faces each—one on each claim.



**Marrs Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in December, 1881; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president, W. F. Marrs; vice-president, Jno. J. Crooke; secretary, John G. Taylor, Jr.; treasurer, Geo. W. Middleton—all Denver; office No. 3 Tabor Opera-house Block, Denver, and Rico; owns the Newman Group, seven claims, 300x1500 feet each, viz.: Chestnut, Newman, Swansea, Swansea Extension, Parsons, Tip-top, and Ocean-Wave; situated on the west slope of Dolores Mountain, one-half mile south-east of Rico, Pioneer district; located in 1879, and the first three patented; vein appears to be a horizontal contact from two to three feet thick, cropping out in an abrupt bluff, somewhat like a coal deposit, and containing a pay streak from four to eighteen inches thick, with perpendicular feeders which may properly be called fissures, from ten to twenty four inches wide, cutting up through the stratification and ending in the contact, with pay streaks from three to ten inches wide, containing the same character of mineral as the contact, except that it is possibly a little higher grade, the ore being principally free milling, and consisting mainly of earthy oxides of iron and manganese, mixed with a little lead carbonate, sulphate, sulphide, and oxide, carrying silver in the form of sulphide, chloride, and native in calcareous sandy gangue, yielding, when sorted, from twenty to sixty ounces silver per ton, intermixed with which is a considerable quantity of smelting-ore in the form of sulphides of zinc, iron, lead, and copper, yielding from $200 to $350 per ton, when sorted, in gold, silver, and lead; developments—eight tunnels, 300, 295, 180, 135, 160, 180, 140, and 90 feet long, respectively, and four shafts, fifty, fifty, forty, and seventy-six feet deep, respectively, with 270 feet of drifting and some stoping; output during the progress of development over $50,000, and the value of the ore reserves is estimated at over $500,000.

**Mary Alice and Maria F.**—Two claims 300x1500 feet each; situated in Aztec Gulch, one and one-half miles north-west of Rico, Pioneer district; located in August, 1881; owners J. S. C. Marshall and J. H. McEwen, both Rico; veins both fissures, eighteen and forty inches wide, respectively, containing gold and silver bearing quartz, which assays on the first fifteen ounces silver and some gold, and on the last one ounce gold and seven ounces silver per ton; developments—one twenty-nine-foot tunnel and one thirty-foot shaft, respectively, on each claim.

**Mayflower.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-fourth miles north of Rico, Pioneer district; located in September, 1879; owners Josiah Spurlock and W. K. Smith, both Rico; vein a fissure five feet wide, pay streak fifteen inches, containing lead and iron carbonates in a decomposed gangue, assaying eighteen ounces silver per ton; developed by one eighty-foot incline shaft.

**Melvin Clarence.**—300x1500 feet; situated on Dolores Mountain, adjacent to the Newman Group, Pioneer district; the developments consisting of one tunnel eighty feet long on the vein, which varies from eight to twelve feet in width, containing galena and gray copper in a quartz gangue, milling, when sorted, thirty per cent lead and forty ounces silver per ton, with a vein-matter of quartz, and some additional workings.

**Melvina.**—300x1500 feet; situated on the west slope of Telescope Mountain, one mile north of Rico, Pioneer district; containing two fissure veins, twelve and six feet wide between walls, respectively, with fair pay streaks of a good grade mineral, which is improving as depth is gained; the developments consisting of several shafts and tunnels.

**Merrimac and Catalpa.**—Two claims 300x1500 feet each; situated on the west slope of Telescope Mountain, and on the north slope of Ex-

pectation Mountain, respectively, one mile north and west, respectively, from Rico, Pioneer district; located in July, 1879, and patented in June, 1882; owners S. H. Burghardt, Rico, D. A. Cook, C. F. Bull, and Douglass Hateman, all Ottawa, Ills.; veins both fissures, in the former fifteen feet wide, containing streaks of carbonate ore, which assays from twenty to thirty-five ounces silver per ton; developed by one cross cut forty-five feet long, a drift on the vein from the cross-cut twenty-five feet long, one shaft fifty feet deep, and a cross cut from it eleven feet long, and in the latter forty inches wide, containing streaks of lime quartz which carry silver, and which assays from twenty to thirty-five ounces silver per ton; developed by two cross cuts forty-five and seventeen feet long, respectively, and one sixteen-foot shaft.

**Minnie.**—(See Red Bank and Minnie.)

**Minnie.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in January, 1882; owners Oscar H. Taylor, J. W. Lyon, and D. Woodruff, all Rico, and T. C. Johnson, Los Angeles, Cal.; vein a fissure fifty-six inches wide, pay streak twelve inches, containing sulphides of silver and tellurium in a quartz gangue, which mills, when sorted, $175 per ton, in silver and gold; developed by one seventy-nine-foot incline, at mouth of which is a shaft-house; output about ten tons.

**Modoc.**—300x1500 feet; situated on the north slope of Expectation Mountain, adjoining the Whale; the developments—one twenty-five-foot open cut, exposing a vein twenty inches wide, containing silver-bearing quartz.

**Monarch.**—(See Mountain Monarch.)

**Mohegan and Stranger.**—Two claims 300x1500 feet each; situated on the east slope of Expectation Mountain, three-fourths mile west of Rico, Pioneer district; located in 1879; owners L. W. Liscomb, Rico (F. A. Adams, Rico, is part owner in the last); veins both fissures, four and three feet wide, respectively, containing carbonates and copper pyrites in a quartz gangue, which assays in the former claim twenty-five ounces silver per ton; developments—two tunnels 150 and 134 feet long, respectively, and one five-foot shaft from the bottom of the last, all on the Mohegan, and one twenty-five-foot tunnel and one twelve-foot incline shaft from end of the tunnel, on the Stranger.

**Monitor.**—(See North Star and Monitor.)

**Monitor, Standard, and Silver Cord.**—Three claims 300x1500 feet; situated on the south slope of Mount Wilson, nine miles north of Rico, Pioneer district; located in 1881 and 1882; owners C. H. Byfield, M. Hippler, and J. Sutherland, all Rico; veins all fissures from three to six feet wide, pay streaks fifteen, six, and ten inches wide, respectively, containing carbonates, which assay thirty-five per cent lead, forty ounces silver, and some gold per ton, with a decomposed gangue; developed, respectively, by one thirty-five-foot shaft, one eighteen-foot open cut, and one twenty-foot open cut; also one tunnel 200 feet long, designed to cut the vein 200 feet deep.

**Montana and Pacific.**—Two claims 300x1500 feet each; situated on the south slope of Nigger Baby Hill, one mile north-east of Rico, Pioneer district; located June, 1879; owners J. C. Love and W. H. Sockrider, both Rico; veins both fissures, pay streaks twenty to thirty and ten to thirty inches wide, respectively, containing oxides and sulphurets, which mill $25 per ton, when sorted from the gangue-matter; developed by two cross-cut tunnels forty and twenty-five feet long, respectively, and two incline shafts thirty and sixty-five feet deep, respectively.



**Montreal and Colorado Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president, Franc O. Wood; secretary and treasurer, M. L. DeCorsey—both Colorado Springs; offices Colorado Springs and Rico; owns the Silver Wedge, 300x1500 feet; situated on the south slope of Nigger Baby Hill, three-fourths mile north-east of Rico, Pioneer district; located 1880, and patented 1882; vein a fissure from six to thirty inches wide, containing quartz carrying black manganese and galena, which assays twenty-five ounces silver per ton; developed by one fifty-foot incline, with a twenty-foot shaft; and Athabaska, 300x1500 feet; situated at the mouth of Deadwood Gulch, one mile south of Rico, Pioneer district; located August, 1880; vein a fissure twenty inches wide, containing silver-bearing quartz, which assays fifteen ounces silver per ton; developed by one tunnel twenty-two feet long.

**Mountain Meadow Coal Claim.**—360 acres; situated on the Mesa divide, between the east and west Dolores Rivers, eight miles north-west of Rico, Pioneer district; located July, 1882, and in process of patent; owners J. Q. A. Norton, Lawrence, Kas., G. E. McNamara, Deming, N. M., and D. H. Saylor, Durango; containing one stratum of bituminous coal thirty-two inches thick, and classified as No. 1 fuel and cooking-coal; developed by one sixty-foot drift.

**Mountain Monarch.**—300x1500 feet; situated on the west slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located July, 1879; owners O. P. Ghrist and F. M. Medley, both Rico, and Walter Evans, Ames; vein a fissure three feet wide, pay streak twenty inches, containing lead carbonates, which mills, when sorted from the gangue-matter, twenty-five per cent lead and forty ounces silver per ton; developed by one cross-cut twenty feet long and one drift on the vein seventy feet long.

**Mountain Spring.**—300x1500 feet; situated on the west slope of Telescope Mountain, three-fourths of a mile north of Rico, Pioneer district; located January, 1881; owners C. J. Bang and Henry Phillippi, both Rico; vein a fissure three feet wide, pay streak six inches, containing iron and lead carbonates in a decomposed gangue, which assays twelve ounces silver per ton; developed by two shafts twenty-two and twenty-seven feet deep, respectively, with a tunnel eighteen feet long from bottom of the latter.

**Mountain View.**—300x1500 feet; situated on the divide between the east and west Dolores Rivers, six and one-half miles north-west of Rico, Pioneer district; located in July, 1880; owners J. W. Winkfield, Rico, Wm. Fraser, Taos, N. M., and Lorenzo Kellogg and others, Dunlap, Ia.; vein a fissure fifty inches wide, containing pockets and chimneys of sulphurets, carrying black oxide of copper, gray copper, and some antimonial silver, which mills, when sorted, fifty ounces silver per ton; developed by two shafts fifty and forty-five feet deep, respectively.

**Mountain View.**—300x1500 feet; situated on the south side of the West Dolores River, eight miles north-west of Rico, Pioneer district; located June, 1882; owners F. J. Walker, T. K. Gash, and J. J. Davis, all Rico; vein a fissure three feet wide, pay streak from six to ten inches of tellurium ore, in a quartz gangue, which assays $100 per ton; developed by one ten-foot-face cut and one cross-cut tunnel thirty feet long.

**Nettie.**—300x1500 feet; situated on the west slope of the divide between the east and west Dolores Rivers, seven miles north-west of Rico, Pioneer district; located in October, 1879; owners J. W. Winkfield, Rico, and Wm. Connors, Durango; vein a fissure five feet wide, pay streak twenty inches, con-

taining gray copper and antimonial silver in a quartz gangue, which assays thirty-seven ounces silver per ton; developed by one forty-five-foot tunnel and one thirty-five-foot shaft from the end of the tunnel.

**New Year.**—300x1500 feet; situated on the west slope of Dolores Mountain, at Rico, Pioneer district; located in October, 1879; owners D. F. Taylor, Wm. Orton, and Hensel Bros., all Rico; vein a fissure four feet wide, with porphyry walls, pay streak from ten to sixteen inches, containing galena with copper and iron pyrites in a quartz gangue, which mills, when sorted, sixteen per cent lead and 50 ounces silver per ton; developed by one seventy-foot shaft, from which several tons were shipped to the Grand View Smelter.

**Newman Group.**—(See Marrs Consolidated Mining Company.)

**Niagara.**—300x1500 feet; situated on the west slope of Telescope Mountain, one-fourth mile north of Rico, Pioneer district; located in August, 1879; owners E. A. Robinson, R. C. Darling, and Jno. Glasgow, all Rico, and L. B. da Ponte, New Orleans; vein a fissure forty inches wide, containing galena in a quartz gangue, which assays thirty ounces silver per ton; developed by one tunnel 100 feet long.

**Nigger Baby.**—300x1500 feet; situated on the south slope of Nigger Baby Hill, one mile north-east of Rico, Pioneer district; located in April, 1879; owners Wm. Valiant and Luke Hunter, both Durango, and Col. Beaumont, Los Pinos Agency; vein a contact, with sandstone and lime-rock walls, fifteen inches wide, containing galena and manganese, which assays twenty-five ounces silver per ton, with considerable gangue; developed by one incline shaft forty-nine feet deep.

**Nonpareil.**—300x1500 feet; situated on the south slope of Mt. Elliot, three miles north-west of Rico, Pioneer district; located in July, 1880; owners Jno. Eggers, Henry Dutch, and Mrs. J. L. Heath, all Rico; vein a fissure fifty inches wide, pay streak five inches, containing sulphurets and free gold in a quartz gangue, which mills, when sorted, $30 per ton; developed by one tunnel thirty feet long.

**North Star and Monitor.**—Two claims, 300x300 and 300x1500 feet, respectively; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in July, 1879; owners A. V. Gorla, R. E. Love, and R. B. Adams, all Rico, and the estate of —— Wilson, Silverton; vein a fissure three feet wide, pay streak fourteen inches, containing copper and iron pyrites in a quartz gangue, which assays twenty-five per cent copper and twenty-eight ounces silver per ton; developed by three tunnels, twenty, twenty-five, and thirty-five feet long, respectively.

**O. K.**—300x1500 feet; situated in Aztec Gulch, one mile north-west of Rico, Pioneer district; located in February, 1882; owners Henry Gaubatz and Chas. Forsberg, both Rico; vein a fissure containing quartz which carries galena, assaying from ten to fifteen ounces silver per ton; developed by one twenty-four-foot open cut and one fifty-nine-foot tunnel.

**Omaha.**—300x1500 feet; situated on the west slope of Dolores Mountain, one mile east of Rico, Pioneer district; located in April, 1881; owners S. Enfield and Frank M. Medley, both Rico; vein a fissure three feet wide, composed of quartz carrying galena in streaks, which mills, when sorted, forty per cent lead and thirty-five ounces silver per ton; developed by one shaft 100 feet deep.



**Omaha Group.**—Eleven claims, 300x1500 feet each, viz.: Omaha, Hensen, May, Iron, Pay-master, Western, Centennial, Monitor, Christine, Eddie, and Jno. Thomas; situated on the divide between the east and west Dolores Rivers, six and one-half miles north-west of Rico, Pioneer district; located in 1881 and 1882; owners Julius Thompson and J. J. Cohnan, both Rico, F. W. Pitkin, Pueblo, and J. L. Gillett, Milwaukee; veins all fissures containing quartz, which carries pockets of black oxides of copper and gray copper, assaying from $15 to $20 per ton; the developments consisting mainly of assessment work.

**Orphan Girl, Dawn of Day, and Wild Cat.**—Three claims, 300x1500 feet each; situated on Dolores Mountain, one and one-half miles east of Rico, Pioneer district; owner Joseph Meredith, Rico; on these claims considerable work is done, 150 tons of ore having been taken from the surface on the first claim, which milled fifty per cent iron, and was used by the smelters as a flux; in the Dawn of Day a sixty-foot shaft is sunk, with a sixty-foot drift from the bottom of the shaft, showing a vein four feet wide, containing a black manganese and carbonate ore, with a decomposed gangue; and on the Wild Cat a thirty-foot adit, exposing a galena-bearing vein.

**P. D.**—300x1500 feet; situated on the south slope of Telescope Mountain, one and one-fourth miles east of Rico, Pioneer district; located March, 1880; owners W. Holcomb, H. H. Hart, and Geo. Hurlburt, all Rico; vein a fissure from two to four feet wide, pay streak six inches, composed of galena and some iron and copper pyrites, with a quartz gangue, which assays seventy-five ounces silver per ton; developed by one tunnel fifty feet long.

**Pacific.**—(See Montana and Pacific.)

**Parlin.**—300x1500 feet; situated in Horse Gulch, one and one-half miles north-west of Rico, Pioneer district; located in May, 1880; owners Jos. Castello, Rico, Chas. N. Roe, Durango, S. F. Scott and Emil Werk, both Kansas City, Mo.; vein a fissure eleven feet wide, pay streak sixteen inches, composed of chlorides in a quartz gangue, which mills, when sorted, sixty ounces silver per ton; developed by two open cuts twenty-five and thirty feet long, respectively.

**Parole Group.**—Consisting of Parole, Orphan, and Leap-year, 300x1500 feet each; situated on the north slope of Dolores Mountain, one mile east of Rico, Pioneer district; located in 1879, except the Orphan located in July, 1882; owners H. J. Caldwell, Richard Johnstone, and James Robbins, all Rico, and the Rico Smelting Company; veins all contacts, in the Parole thirty feet wide, and perpendicular, with porphyry and lime walls, pay streak from six to sixty inches wide, and averaging twenty-eight inches of lead carbonates, with some iron and manganese in a decomposed gangue, which mills, when sorted, from thirty-five to forty-five per cent lead, and from fifteen to twenty-eight ounces silver per ton; developments—one cross-cut and incline sixty feet long, one tunnel 100 feet long, from end of which is a shaft 160 feet deep, with drifts from the tunnel fifty and thirty feet long, respectively, and one cross-cut seventy-five feet long on the Parole, one twenty-foot tunnel on the Keystone, one twenty-foot tunnel on the Orphan, and one incline 175 feet deep on the Leap-year; output from the Parole for 1882 about 150 tons.

**Pay-master.**—300x1500 feet; situated on the west slope of Telescope Mountain, near the Wabash, Pioneer district, and in process of patent; owners R. H. Drennon and Emil Werk, both Kansas City, and E. P. Suydam, Denver; the developments consisting of one tunnel on the vein, which shows a very fair material, similar to the mineral in other locations in the same vicinity.

**Pay-master.**—300x1500 feet; situated on the north slope of Dolores Mountain, two miles east of Rico, Pioneer district; located in March, 1879; owners Geo. R. Long, Geo. Percival, and Daniel Rice, all Rico; vein a fissure seven feet wide, pay streak eleven inches, composed of black manganese in a quartz gangue, which assays thirty-five ounces silver per ton; developed by one forty-two-foot tunnel and one seventy-four-foot shaft from end of tunnel.

**Peacock.**—300x1500 feet; situated on the west slope of Telescope Mountain, Pioneer district; developments—one tunnel thirty-five feet long, showing a vein thirty inches wide, containing an ore which assays from twenty-five to fifty ounces silver per ton.

**Pearl.**—300x1500 feet; situated on the west slope of Dolores Mountain, one and one-half miles south-east of Rico, Pioneer district; located in July, 1879; owners J. E. Lacome, J. H. Younglove, and Louis Sherbino, all Rico; vein a fissure eight feet wide, containing black iron and manganese in a quartz gangue, which assays sixteen ounces silver per ton; developed by one forty-seven-foot shaft and one fifteen-foot-face open cut.

**Perhaps.**—300x1500 feet; situated on the north slope of Expectation Mountain, two and one-half miles north-west of Rico, Pioneer district; located in July, 1880; owners Dr. J. P. Landon and Geo. Sanborn, both Rico; vein a fissure five feet wide, pay streak ten inches, composed of iron, manganese, and oxides in a quartz gangue, assaying twenty-five ounces silver per ton, and the entire vein is more or less mineralized; developed by one tunnel 110 feet long.

**Petzite.**—300x1500 feet; situated on the south slope of Mt. Elliot, three miles north-west of Rico, Pioneer district; located March, 1880; owners Leon and John Eggers and Hiram Heath, all Rico, and F. Morey, Washington, D. C.; vein a fissure fifty inches wide, containing two pay streaks, the first forty-five inches wide, composed of arsenical sulphuret of iron, which mills $35 per ton, and the second from one-half to one inch in width of tellurium ore, which mills $500 per ton; developed by two cross-cut tunnels thirty and twenty-five feet long, respectively, with one sixty-foot shaft from the end of the last.

**Pigeon.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-half miles north of Rico, Pioneer district; located in 1879, and patented in 1881; owners J. W. Winkfield, Rico, J. O. Packer, Trinidad, Colo., and J. M. Acker, Oakland, Cal.; vein a fissure one foot wide, cropping out on the surface for 1,500 feet, containing iron and lead carbonates in a decomposed quartz gangue, which mills, when sorted, sixteen per cent lead, fifty per cent iron, and thirty-two ounces silver per ton; developed by two tunnels forty and thirty feet long, respectively, one shaft ninety-two feet deep, and a drift from the bottom of the shaft 120 feet long; aggregate output 200 tons, and daily shipments twenty tons.

**Plymouth Rock.**—300x1500 feet; situated on the west side of the divide between the east and west Dolores Rivers, four miles north-west of Rico, Pioneer district; located in August, 1881; owners J. E. Carr and Henry Klingender, both Rico; vein a fissure thirty inches wide, composed of quartz carrying iron and copper pyrites and manganese, which assays twenty ounces silver per ton; developed by one shaft ten feet deep.

**Poverty.**—300x1500 feet; situated on the east slope of Mt. Elliot, two miles north-west of Rico, Pioneer district; located in August, 1879, and patented in 1883; owners Julius Thompson and Geo. W. Miles, both Rico, J. M. Jardine, Ouray, and J. W. Simmons, Lake City; the developments consist of assessment work, showing a very fair material.



**Premier.**—300x1500 feet; situated on the west slope of Telescope Mountain, three-fourths mile north-east of Rico, Pioneer district; located July, 1880; owners Franc O. Wood and W. H. Lamb, both Colorado Springs; vein a fissure five feet wide, pay streak from ten to twelve inches, composed of gold and silver bearing quartz, which mills $55 per ton; developed by one fifty-two-foot cross-cut and one fifty-two-foot drift on vein from end of cross-cut.

**Puzzle Extension.**—(See Santa Clara Mining Company.)

**Puzzle Mining Company (The).**—(*Limited*); owns the Puzzle mine, 300x1500 feet; situated in Horse Gulch, two miles north-west of Rico, Pioneer district; located in 1879, and patented; vein a nearly horizontal contact, varying from five to sixty inches in thickness, the major portion of the vein-matter being a decomposed quartz carrying native silver, sulphurets of silver, and some manganese, and the balance of the vein-material a soft talc, milling, when sorted, from 100 to 150 ounces silver per ton; developed by five shafts, 100, 31, 22, 35, and 12 feet deep, respectively, 250 feet of drifting, and two cross-cuts fifty and twenty-five feet long, respectively; output 225 tons; and owns two adjoining claims, the Little Carrie and Mark, on which the Company is doing some development work.

**Puzzler.**—(See Rico Silver Mining Company.)

**Query.**—300x1500 feet; situated in Horse Gulch, three miles north-west of Rico, Pioneer district; located 1879; owners Cahn Bros., Rico, W. Woodruff and Prof. Allen, both Chicago; vein a fissure twenty inches wide, pay streak eight inches, composed of gold and silver bearing quartz, which mills, when sorted, probably $40 per ton; developed by one thirty-foot shaft.

**Radigan.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located January, 1882; owners Gus. Misch, Wm. H. Dawson, and C. A. Jones, all Rico; vein a fissure four feet wide, pay streak from ten to fifteen inches, composed of black manganese with some galena and a quartz gangue, which assays from fifteen to thirty ounces silver per ton; developed by one thirty-four-foot incline shaft.

**Raven Tunnel Site.**—3000x6 feet; situated on the west slope of Dolores Mountain, south of the Newman Group, Pioneer district; owners E. L. Davis and H. J. Caldwell, both Rico, and D. A. Cook, Ottawa, Ill.; on which a tunnel is driven 225 feet long, cutting three veins of the following width, respectively, ten, fifteen, and twenty inches, containing galena and copper pyrites, with a quartz gangue-matter.

**Red Bank and Minnie.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west side of the divide between the east and west Dolores Rivers, eight miles west of Rico, Pioneer district; located July, 1882; owners W. B. Whiteside, M. Moran, and D. C. Patterson, all Rico; vein a fissure twenty inches wide, pay streak three inches, composed of gold-bearing quartz, on which a sample assay showed $118 per ton; developed by one ten-foot-face cut.

**Red Cloud.**—300x1500 feet; situated on the west side of the West Dolores River, nine miles north-west of Rico, Pioneer district; located August, 1882; owner Fred. Schallenberger, Deming, N. M.; vein a contact sixteen inches wide, containing narrow streaks of galena and gold-bearing quartz, which assays fifteen ounces silver and one-half ounce gold per ton; developed by an open cut with a ten-foot face.

**Richmond, Albany, and Ella D.**—300x1500 feet each; situated on the south side of Silver Creek, one-half mile east of Rico, Pioneer

district; located from April, 1882, to January, 1883; owners J. W. Burns, Geo. Gilbert, D. A. McGraw, and H. E. Courtney, all Rico; veins all fissures from eighteen to thirty inches wide, containing bismuth and iron in a quartz gangue, which assays from $15 to $55 per ton; developments—one thirty-five-foot tunnel, one twenty-five-foot tunnel, and one fifteen-foot-face cut, respectively, on each claim; (W. B. Whiteside, Rico, is an owner in the Ella D.)

**Rico.**—(See Robert E. Lee and Rico.)

**Rico.**—300x1500 feet; situated on the Smith Fork of Horse Creek, just below the Johnny Bull mine Pioneer district, and, it is said, contains a body of gray-copper ore, assaying from 50 to 250 ounces silver and from one to five ounces gold per ton.

**Rico.**—300x1500 feet; situated on the north slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located in 1880; owners Charles and William Naegelin, both Durango, and John Geogline, Rico; vein a fissure four feet wide, pay streak from eight to twenty-four inches of galena, and some iron pyrites with a quartz gangue, which mills, when sorted, thirty-five ounces silver per ton; developed by one tunnel 130 feet long.

**Rico Coal and Coke Company (The).**—Incorporated under the laws of Colorado, in April, 1882; capital stock, $25,000, in 250 shares of $100 each; president and treasurer, L. Austin; vice-president, Samuel Seesions; secretary, A. G. Stone—all Cleveland; offices Cleveland, and also Rico; owns 640 acres of coal land; situated on the Lake Fork of the East Dolores River, ten miles from Rico, Pioneer district; containing a so-called stratum of bituminous coal of varying thickness; developments—three entries with rooms connected by roads and furnished with iron tracks, tramway, chute, buildings, etc.; the amount of money expended showing that the property is either an unprofitable one or that the management is greatly at fault.

**Rico Consolidated Mining and Milling Company (The).**—Owns the Cleveland and Dolores lodes, 300x1500 feet each, situated on Expectation Mountain, and the Elgin Boy and Lady Elgin in Horse Gulch, together with a number of other claims, in the Pioneer district; on all of which the Company is doing development-work with fairly satisfactory results.

**Rico Mountains Mining Company (The).**—Incorporated under the laws of Colorado, September 22, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Beverley R. Keim; secretary and treasurer, John Bissell; superintendent, James O. Campbell—all Rico; office Rico; owns one-fourth of the Sixty-six (see Sixty-six), also the Lowell, 300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in 1879; vein a fissure four feet wide, pay streak twenty-four inches, composed of galena with a quartz gangue, which assays forty per cent lead and forty ounces silver per ton; developed by one tunnel fifty feet long; Ruby Crown, 300x1500 feet; situated on the south-west slope of Telescope Mountain, three-fourths mile north-east of Rico, Pioneer district; located in 1879; vein a fissure five feet wide, pay streak twenty-eight inches composed of galena, which assays forty per cent lead and forty-five ounces silver per ton; developed by one fifty-foot tunnel; and some other claims, on which the Company is doing development work, and which show fairly.

**Rico Muldoon.**—300x1500 feet; situated on Dolores Mountain, adjacent to the Newman Group, Pioneer district; the developments consisting of one fifty-foot shaft, showing a fissure vein four feet wide at the bottom of the



shaft, containing a vein-matter, and gangue of quartz, and an ore of galena, and gray copper, milling, when sorted, about thirty per cent lead and forty-five ounces silver per ton, with some other workings.

**Rico No. 2.**—300x1500 feet; situated on the south slope of Nigger Baby Hill, three-fourths of a mile north-east of Rico, Pioneer district; located July, 1881; owners Charles N. Roe and Jacob Summa, both Durango, and R. H. Drennon, Emil Werk, G. G. Rounds, and—Burr, all Kansas City, Mo.; vein a fissure four feet wide, pay streak fourteen inches, composed of galena, sulphurets, iron and copper pyrites, which assays fifty ounces silver per ton, with a quartz gangue-matter; developed by one forty-five-foot shaft.

**Rico Passadena Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and general manager, John F. Watkins, St. Louis; vice-president, J. A. Adams; secretary, ————; treasurer,————; offices St. Louis and Rico; owns Leila Davis, 300x1500 feet; situated on the north slope of Dolores Mountain, one-half mile east of Rico, Pioneer district; located in 1880, and patented in March, 1883; vein a fissure four feet wide, traceable on the surface for several hundred feet, and composed of galena, iron and copper pyrites, with some carbonates and manganese, milling thirty per cent lead, twenty per cent iron, and forty ounces silver per ton, when sorted from the gangue-rock; developments consisting of one sixty-foot shaft, with several surface openings, and one tunnel 106 feet long.

**Rico Reduction Company (The.)**—Unincorporated; consisting of Samuel Colvin, John Dean, and J. P. Stewart, all Hollidaysburgh, Pa., John Reilly, D. J. Neff, and H. C. Dern, all Altoona, Pa., A. A. Stevens, A. B. Hoover, and A. M. Hull, all Tyrone, Pa., David Caldwell, Huntingdon, Pa., and W. George Waring, Denver—the last named acting as general manager of the Company; assistant manager, James Stewart, Rico; offices Tyrone, Pa., and Rico, Colo; owns a reduction or lixiviation works; situated on the west side of the Dolores River, one and one-half miles north of Rico; containing Blake Crusher, Cornish Rolls, sampling machinery, sampling and drying ovens, two Batteries of five 750-pound Stamps each, Roaster, leaching-tubs, and small roasters; capacity sixteen tons per day.

**Rico Silver Mining Company (The).**—Incorporated under the laws of Illinois, in December, 1879; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, J. J. West, Chicago; secretary, ——— West, Chicago; treasurer, D. A. Cook, Ottawa, Ill.; manager, S. H. Burghardt, Rico; offices 245 Wabash Ave., Chicago, and Rico, Colo.; owns the Puzzler, Georgie, Bobtail, Little Pet, and mill site, 300x1500 feet each, and five acres, respectively; situated on the south slope of Mt. Elliot, from three-fourths to two miles north-west of Rico, Pioneer district; located in 1880-1, and patented in 1882; veins all fissures from one to four feet wide, containing pockets of galena and gold and silver-bearing quartz, which assays in the Puzzler thirty-eight ounces silver per ton; developments—two shafts forty-five and twenty feet deep, respectively, one level seventy-five feet long, and a cross-cut fifty-nine feet long on the Puzzler; one twenty-five-foot drift and one thirty-foot incline on the Georgie; one ten-foot-face cut and one tunnel 130 feet long on the Bobtail; and one tunnel 155 feet long on the Little Pet.

**Robber State.**—300x780 feet; situated on the north slope of Telescope Mountain, two miles north-east of Rico, Pioneer district; located in November, 1882; owners Josiah Spurlock, N. J. Bradley, C. H. Steele, and J. D. Clark, all Rico; vein a fissure five feet wide, pay streak twenty inches, composed of iron and lead carbonates, which assays $30 per ton, with a de-

composed gangue; developed by one seventy-foot shaft, with a fifteen-foot drift from bottom of shaft.

**Robert E. Lee and Rico.**—Two claims, 300x1500 feet; situated on the west slope of Dolores Mountain, one-half mile south-east of Rico, Pioneer district; located in 1879; owners A. A. Waggoner and A. D. DeMasters, both Rico, and August Riche, Denver; vein appears to be a horizontal contact, from six inches to four feet thick, with sandstone and lime-rock walls, pay streak from one to thirty inches in thickness, composed of galena with a quartz gangue, which mills, when sorted, four ounces gold and forty ounces silver per ton; developed by one shaft fifty-eight feet deep and two tunnels 130 and 25 feet long, respectively.

**Rob Roy and Hancock.**—Two claims, 300x1500 feet each; situated on the west side of the divide between the east and west Delores Rivers, six and one-half miles north-west of Rico, Pioneer district; located September, 1880; owners J. A. Robinson, James Dempster, Henry Lemmon, and T. Morgan Circle, all Rico, and McNamara Bros., Deming, N. M.; vein a fissure seven feet wide, composed of quartz in which appear pockets of copper pyrites carrying gold and silver, assaying $75 per ton; developed by one tunnel seventy-five feet long and one shaft seven feet deep.

**Rocky Point.**—300x1500 feet; situated on the north side of Horse Gulch, two and one-half miles north-west of Rico, Pioneer district; located in April, 1880; owners George R. Long and W. W. Bodley, both Rico; vein a fissure forty inches wide, containing decomposed quartz, which mills, when sorted, ten ounces silver per ton; developed by one tunnel seventy-six feet long and one twenty-six-foot shaft from end of tunnel.

**Roderick Dhu and Emerald No. 2.**—300x1500 feet each; situated on the north slope of Expectation Mountain, two and one-half miles north-west of Rico, Pioneer district; located in 1879 and 1880, respectively, the former patented in 1883; owners Dr. J. P. Landon and Geo. Sanborn, both Rico, and D. A. Cook, Ottawa, Ill.; veins both fissures, four and eight feet wide, respectively, containing galena in a decomposed gangue, which carries iron, manganese, and oxides, assaying in the former ten per cent lead and twenty-two ounces silver and in the latter twelve ounces silver per ton; developed by one tunnel 125 feet long and one shaft 60 feet deep on the Roderick Dhu, and one tunnel 120 feet long and one shaft sixty-five feet deep on the Emerald No. 2.

**Salamander.**—300x1500 feet; situated in Aztec Gulch; one mile north-west of Rico, Pioneer district; located in July, 1879; owner Charles Forsberg, Rico; vein a horizontal contact, with lime-rock and sandstone walls and sixteen inches thick of carbonates in a decomposed gangue, which assays fifteen ounces silver per ton; developments—one twenty-five-foot open cut, with a thirty-foot shaft from end of cut, and one forty-foot tunnel.

**Santa Clara Mining Company (The).**—Incorporated under the laws of Kentucky, June 24, 1881; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, A. Montgomery; vice-president, J. F. Mills; treasurer, Ben. Easton—all Covington, Ky.; secretary, Wm. Norwood, Cincinnati; general manager, X. W. Culbertson, Covington, Ky.; superintendent of mill, J. O. Campbell, Rico, Colo.; offices Covington, Ky., and Rico; owns the Puzzle Extension (an extension of the Puzzle), 300x1500 feet; situated in Horse Gulch, two miles north-west of Rico, Pioneer district; located in July, 1879; vein a blanket, from two to seven feet thick, composed of native silver, sulphurets of silver, and some manganese and chlorides in a decomposed quartz gangue and vein-matter similar to the Puzle, which mills, when sorted, from 100 to 150 ounces silver per ton; developed by two shafts sixty feet deep each



and 300 feet of tunneling; output 250 tons; and the Santa Clara 300x1500 feet; situated on the west slope of Telescope Mountain, about one mile north of Rico; vein a contact, probably twenty-five feet wide, with a low-grade chloride of silver ore disseminated through the entire vein-matter; the developments consisting of one main shaft sixty-five feet deep, with an incline from the bottom of the shaft sixty-five feet deep, and a level running in the opposite direction from the incline, another shaft thirty-five feet deep, with a forty-five-foot incline from the bottom of it, all of which workings show more or less mineral; improvements—one shaft-house, with a California Whim for working the property.

Also owns the Santa Clara Mill (amalgamation-works), containing fifteen Stamps, Crusher, sampler, barrel amalgamators and separator, milling furnace and retort; capacity sixteen tons per day (twenty-four hours); situated one mile north of Rico, on the west side of the Dolores River, on a three-acre mill site owned by the Company.

**School Girl.**—(See Maggie, School Girl, and Sawyer.)

**Shamrock.**—300x1500 feet; situated on the east slope of Expectation Mountain, at Rico, Pioneer district; located April, 1880; owners S. H. Burghardt and Michael Murtagh, both Rico, and H. C. Brown, Decatur, Ills.; vein a fissure fifteen feet wide, pay streak eight feet, composed of galena in a quartz gangue, which mills, when sorted, twenty-four per cent lead and thirty ounces silver per ton; developed by one open cut and tunnel sixty feet long, from end of which is a cross-cut nine feet long, cutting across the vein, and another cross-cut forty feet long; output twenty-five tons.

**Siamese Twins.**—300x1500 feet; situated on the north side of Silver Creek, four miles east of Rico, Pioneer district; located in July, 1881; owners Josiah Spurlock and W. K. Smith, both Rico; vein a fissure five feet wide, pay streak from five to fifteen inches, composed of gold and silver bearing quartz, which assays $40 per ton; developed by one twenty-foot shaft.

**Silver Duke.**—300x1500 feet; situated on the east slope of Mt. Elliot, one mile north of Rico, Pioneer district; located September, 1879; owners A. M. Friend, Brighton, Ia., T. Steudeman and O. H. Taylor, both Rico; vein a fissure twenty-five inches wide, pay streak five inches, composed of galena, oxides, and manganese, with a quartz gangue, which assays from fifteen to thirty-five ounces silver per ton; developed by one adit twenty-eight feet long.

**Silver Glade and N. and B.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west slope of Nigger Baby Hill, at Rico, Pioneer district; located in 1879; owners J. P. Norton, Rico, and T. F. Hooten, Fairplay, and others; vein a fissure two feet wide, composed of galena in a quartz gangue, which assays thirty ounces silver per ton; developed by two shafts, one on each claim, forty and twenty feet deep, respectively.

**Silver Heels and Colorado Boy.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Horse Gulch, north-west of Rico, Pioneer district; owners E. L. Davis, T. P. Kennedy, and J. E. Howard, all Rico, and Paul Rodenhouse, Silverton; vein a vertical fissure three feet wide, containing quartz carrying sulphurets and black manganese, milling, when sorted, from $25 to $50 per ton; developments—one fifty-foot shaft, with a twenty-foot drift from the bottom of it, on the former, and a sixty-foot shaft and a thirty-foot adit on the latter.

**Silver Plume and Pay Boy.**—Two claims, 300x1500 feet each; situated on the west slope of Telescope Mountain, one and one-half miles north of Rico, Pioneer district; located in April, 1881; owners Patrick Cain, Jno.

Gault, and Julius Thompson, all Rico, and David Swickheimer, Red Mountain City; vein both fissures, in the former, forty inches wide, composed of iron and lead carbonates, with considerable gangue, which assays sixteen per cent lead and fifty ounces silver per ton; developed by one twenty-two foot shaft and one tunnel sixty-two feet long, cutting vein at depth of fifty feet.

**Silver Wedge.**—(See Montreal and Colorado Mining and Smelting Company.)

**Silver Wing.**—300x1500 feet; situated on the west slope of Telescope Mountain, Pioneer district; developments—one tunnel sixty feet long, showing a body of galena and carbonates in a decomposed gangue, milling from twenty-five to fifty per cent lead, and from twenty-five to fifty ounces silver per ton, with some other workings.

**Sinbad Group.**—Seven claims, 300x1500 feet each; viz.: Sinbad, Cashier, Yellowstone, War Chief, Gold-dust, Vindicator, and Fredonia; situated on the south slope of Mount Elliot, three miles north-west of Rico, Pioneer district; located in 1879; owners of Sinbad and Cashier R. E. Love and James Ross, of Yellowstone, N. S. and W. E. Love, and the others are owned by R. E., N. S., and W. E. Love, all Rico; veins all fissures, varying from one to five feet wide, pay streaks from four to twenty inches, composed of gold and silver bearing quartz, carrying some iron pyrites, which assays from 50 to 100 ounces silver per ton, and tests on the Sinbad claim run much higher; developed respectively by one ninety-foot shaft, one seventy-five-foot tunnel, one seventy-five foot tunnel, one sixty-foot tunnel, one fifteen-foot tunnel, one sixty-foot tunnel, and one fifty-foot tunnel, and also one tunnel 160 feet long, designed to cut the veins in all the above named claims.

**Sixty-Six.**—300x1500 feet; situated on the north slope of Expectation Mountain, and in Horse Gulch, one mile north-west of Rico, Pioneer district; located in 1879; owners The Rico Mountains Mining Company and others; vein a fissure thirty inches wide, containing pockets and chimneys of sulphurets of silver and manganese, which assays $200 per ton, with a quartz gangue; developed by two tunnels ninety-five and forty-five feet long, respectively, and one shaft twenty-five feet deep.

**Slide.**—300x1500 feet; situated on the west slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located in August, 1879; owner Samuel Tate, Jr., Denver; vein a fissure four feet wide, containing black manganese in a quartz gangue, which assays thirty ounces silver per ton; developed by one twenty-five-foot tunnel and one fifty-foot cross-cut.

**Snow-bank.**—300x1500 feet; situated on the west slope of Telescope Mountain, two and one-half miles north of Rico, Pioneer district; located August, 1879; owners D. A. McGraw, Rico, T. B. Townsend, Montrose, G. W. Hutchinson and A. D. Burris, both Kansas City, and H. R. Doane, Delavan, Wis.; vein a fissure four feet wide, pay streak ten inches composed of galena, with some quartz gangue-matter, which assays thirty-five per cent lead and thirty-five ounces silver per ton; developed by one tunnel fifty-five feet long.

**South Park.**—300x1500 feet; situated on the north slope of Dolores Mountain, one-half mile east of Rico, Pioneer district; located July 14, 1879; owners W. J. Cox, Rico, and Col. Jochmous, Denver; vein a fissure from four to six feet wide, pay streak fifteen inches, composed of galena and copper pyrites in a quartz gangue, which mills, when sorted, five per cent lead and forty-two ounces silver per ton; developed by two tunnels 91 and 250 feet long, respectively.



**Spanking Jack.**—300x1500 feet; situated on the west side of the divide between the east and west Dolores Rivers, six and one-half miles north-west of Rico, Pioneer district; located August, 1880; owners J. A. Robinson, Rico, H. Bartholomew and J. W. Randel, both Durango, and McNamara Bros., Deming, N. M.; vein a fissure twelve feet wide, containing fifty inches of quartz carrying copper pyrites, gold, and silver, which assays $25 per ton; developed by one shaft 117 feet deep and two tunnels 302 and 96 feet long, respectively.

**Spotted Tail.**—300x1500 feet; situated on the south slope of Mount Elliot, two and one-half miles north-west of Rico, Pioneer district; located January, 1881; owners F. C. Bishop, Jno. Rorison, and Henry Phillippi, all Rico; vein a fissure twenty-four inches wide, containing honey-combed quartz carrying sulphurets and some native silver, which assays $25 per ton in silver; developed by one thirty-foot tunnel.

**St. Louis.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located July, 1879; owners Gus. Misch, A. V. Gorla, and Jno. Eder, all Rico, and Gust. C. Giamboni, Trout Lake; vein a fissure four feet wide, pay streak from fifteen to twenty inches, containing carbonates and galena in a decomposed gangue, which mills, when sorted, sixteen per cent lead and forty ounces silver per ton; developments—one tunnel seventy-five feet long, two shafts forty and thirty feet deep, respectively, and one sixty-foot cross-cut.

**Standard.**—(See Monitor, Standard, and Silver Cord.)

**Stephen B. and John B.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the south side of Horse Gulch, two and one-half miles north-west of Rico, Pioneer district, and patented; owners D. E. Cornell, S. S. Sharp, and Dr. G. B. Wood, all Wyandott, Kas., and G. W. Miles, Kansas City, Mo.; vein a fissure, with an outcrop ten feet wide, containing a vein-matter of decomposed quartz, with an ore of silver sulphurets, native silver and some manganese, black oxide of copper, and galena in a decomposed gangue, milling, when sorted, from fifteen to forty-five ounces silver per ton; developments—about 100 feet of open cuts on each claim.

**Sundown Mining Company (The).**—Owns the Sundown lode, 300x1500 feet; situated on Dolores Mountain, Pioneer district; on which the Company is doing development work, and which contains a large body of low-grade ore.

**Sunrise.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in April, 1882; owners Charles Forsberg, Henry Gaubatz, and John Rigoli, all Rico; vein a horizontal contact six feet thick, with sandstone and lime rock walls, containing streaks of galena and carbonates, assaying twenty-five per cent lead and from ten to twenty ounces silver per ton, with a decomposed gangue; developed by one forty-one-foot shaft and one tunnel twenty-eight feet long, the latter cutting a six-inch vein, carrying mineral.

**Tecumseh.**—300x1500 feet; situated on the west side of the divide between the east and west Dolores Rivers, four miles north-west of Rico, Pioneer district; located in June, 1880; owners J. E. Carr, John Eder, Rudolph Uhrig, and Henry Ellenwood, all Rico; vein a fissure forty inches wide, containing quartz carrying copper and iron pyrites, which assays $20 per ton in gold and silver; developed by one twenty-five-foot tunnel.

**Telescope Queen and Climax.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west slope of Telescope Mount-

ain, two miles and a half north-east of Rico, Pioneer district; located September, 1880; owners A. P. Adams, Albany, N. Y., H. L. Paine, Kansas City, and C. N. Cox, Denver; vein a fissure six feet wide, pay streak five inches, composed of oxides, manganese, and galena, with a considerable gangue, assaying fifty ounces silver per ton; developed by two tunnels thirty feet long each.

**Thistle.**—300x1500 feet; situated on the east slope of Expectation Mountain, one-half mile west of Rico, Pioneer district; located in January, 1883; owner E. H. Burghardt, Rico; vein a fissure forty inches wide, containing galena in a quartz gangue, which mills, when sorted, thirty-five per cent lead and thirty-five ounces silver per ton; developed by one fifty-foot shaft.

**Thomas.**—300x1500 feet; situated on the west slope of Calico Peak, seven miles north-west of Rico, Pioneer district; owners C. J. Bang, J. J. Cohnan, and the estate of J. Thomas, all Rico; vein a fissure four feet wide, pay streak five inches composed of iron carbonates, with a decomposed gangue, which assays ten ounces silver per ton; developed by one fifteen-foot-face open cut and one fifteen-foot tunnel from end of cut.

**Tuf Nut, Highland Mary, and Little Mamie.**—Three claims, 300x1500 feet each; situated on the north slope of Dolores Mountain, one and one-half miles east of Rico, Pioneer district; located in June, 1882; owners David Evans, Hugh Scott, and Thomas Denning, all Rico; veins all fissures about four feet wide, pay streaks from ten to fifteen inches, composed of manganese and galena, which assay from twenty-two to thirty ounces silver per ton, with a quartz gangue; developed by two tunnels twenty-five feet long each, one shaft thirty-five feet deep, and one open cut with a fifteen-foot face.

**U. S. Grant.**—300x1500 feet; situated on the south slope of Dolores Mountain, one and one-half miles south-east of Rico, Pioneer district; located in May, 1881; owners J. C. Love and John Riley, both Rico; vein a fissure five feet wide, containing gold and silver bearing quartz, which assays from eight to fifteen ounces silver and a trace in gold per ton; developed by two shafts twelve and twenty feet deep, respectively.

**Uncle Ned and Harvey.**—Two claims, 300x1500 feet each; situated on the south slope of Telescope Mountain, one and one-half miles north-east of Rico, Pioneer district; located in 1881 and 1879, respectively, and patented in 1882; owners J. F. Wannemaker and N. J. Bradley, both Rico, A. M. Friend, Brighton, Iowa, and Herman Garlichs, Aurora, Illinois; vein a fissure fourteen feet wide, pay streaks twenty inches, composed of galena and iron pyrites, which mills eighteen per cent lead and seventy-five ounces silver per ton, when sorted from the gangue-matter; developed by one tunnel 150 feet long and three shafts, 1st 110 feet deep, with a fifty-foot drift from the bottom, 2d ninety feet deep, with a forty-foot drift at the bottom, and the 3d forty feet deep; output forty tons.

**Uncle Jess.**—300x1500 feet; situated on the south slope of Nigger Baby Hill, one mile north-east of Rico, Pioneer district; located in December, 1882; owner J. C. Love, Rico; vein a fissure four feet wide, containing galena with zinc and iron in a quartz gangue, which assays twenty per cent lead and twenty-five ounces silver per ton; developed by one incline shaft sixteen feet deep.

**Undine.**—300x1500 feet; situated on the west slope of Telescope Mountain, one and one-half miles north of Rico, Pioneer district; located in 1879; owners D. D. Gregory, Afton, Iowa, and others; vein a fissure three feet wide,



pay streak twelve inches, composed of iron pyrites, galena, and some zinc, in a quartz gangue, which assays fifty-five ounces silver per ton; developed by one fifty-foot tunnel, one thirty-foot shaft, and one thirty-five-foot drift.

**Union Coal Mine.**—640 acres; situated on the south side of the Lake Fork of the Dolores River, ten miles north of Rico, Pioneer district; owners J. C. Thompson, L. O. Towne, Guy Hart, and A. E. Arms, all Rico; containing one stratum of bituminous coal twenty-four inches thick, and cropping out on the river-bank for one-fourth mile; developed by one entry 100 feet long, connected with several rooms of varying size; entry connected with wagon road by a seventy-five-foot chute; output thirty-five tons.

**Utah.**—300x1500 feet; situated on the north fork of Horse Gulch, three miles north-west of Rico, Pioneer district; located in 1879; owners Louis Habermann, Rico, Geo. Kelly, S. J. Patterson, David Hull, Harvey Bishop, and J. B. Wheeler, all Dunlap, Iowa; vein a fissure eight feet wide, pay streak from thirty-five to forty inches, composed of galena in a quartz gangue, which mills, when sorted, twenty-one per cent lead and twenty-one ounces silver per ton, but the entire vein is mineralized; developed by one tunnel 200 feet long, cutting vein seventy-five feet deep, and one shaft twenty-five feet deep.

**Vanderbilt.**—300x1500 feet; situated at the south-west base of Lone Cone, eighteen miles north-west of Rico, Pioneer district; located in April, 1881; owners F. D. Margowski and H. D. McGillvray, both Telluride; ore body appears to be a deposit fifty feet in width, containing horizontal streaks of lead carbonates, which assay one ounce gold and ten ounces silver per ton, with a decomposed gangue; developed by one twelve-foot level and one fifteen-foot open cut.

**Venus No. 2.**—300x1500 feet; situated on Pappoose Creek and in Horse Gulch, one and one-half miles north-west of Rico, Pioneer district; located in May, 1881; owner B. E. Ladd, Jr., Rico; vein a fissure thirty inches wide, pay streak five inches composed of galena, with some chlorides and sulphurets, which assays sixteen ounces silver per ton; developed by one twenty-foot shaft.

**Victoria.**—(An extension of the Johnny Bull), 300x1500 feet; situated on the east side of the divide between the east and west Dolores Rivers, six miles north-west of Rico, Pioneer district; located in August, 1879; owners T. R. Grigsby and Jno. Geogline, both Rico, and G. A. Ambold, Durango; vein a fissure, with a mineral body thirty inches wide, containing streaks of sulphuret and gray-copper ore, which mills, when sorted from the gangue-matter, $100 per ton in silver and gold; developed by one shaft thirty-five feet deep.

**Vista Grande Coal Measures.**—Situated on the right bank of the Dolores River, about six miles from Rico, Pioneer district; owners W. George Waring, Denver, and Fred Hayes, Rico; containing a vein, or stratum, of bituminous coal thirty inches thick, classified as first-class fuel and coking-coal, analysis showing only about ten per cent ash; developments—one main gangway 160 feet long, first entry twenty-five feet long 125 feet from the mouth of the gangway, and a chamber started.

**Vulcan.**—300x1500 feet; situated on the south fork of Horse Gulch, two and one-half miles north-west of Rico, Pioneer district; located in October, 1881; owners C. W. Taber, J. L. Campbell, and Thos. Taney, all Rico; vein a fissure five feet wide, containing hard carbonates and iron in a decomposed gangue, which assays twenty-one ounces silver per ton, but there are streaks which will run much higher; developed by one ninety-seven-foot tunnel and one fifty-foot shaft from bottom of tunnel.

**W. B. Norton Coal Claim.**—Eighty acres; situated on the west side of the Dolores River, seven miles north of Rico, Pioneer district; recorded as Home-stake claim in 1882; owner W. B. Norton, Rico; containing one stratum of bituminous coal twenty-eight inches thick and classified as No. 1 fuel and coking-coal; developed by one twenty-five-foot cut and one twenty-five-foot shaft.

**Wabash and Democrat Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in August, 1880; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, R. H. Drennon; vice-president, Joshua Thorne; secretary, Chas. Vogt; treasurer, J. S. Chick—all Kansas City, Mo.; offices Kansas City, Mo., and Rico, Colo.; owns two claims, 300x1500 feet each, viz.: Wabash, title U. S. patent, and Democrat, both situated on the west base of Telescope Mountain, one mile north-east of Rico, Pioneer district; the vein is a contact, between lime, sand, and porphyry, the general direction of which is south-east and north-west, dipping in the latter direction about thirty degrees; the character of the ore is galena and carbonates, interspersed with manganese of iron in a lime and porphyry gangue and a vein-matter of atalcy substance, the size and extent of the ore body being undetermined; average value of ore twenty-six per cent lead and twenty-five ounces silver per ton, when sorted, although assays have been obtained indicating a higher grade in some places; developments on the Wabash—one main, double-compartment shaft 167 feet deep, from the bottom of which is one 109-foot drift, and other drifts at intervals from the surface downwards, one incline 105 feet deep, from which four levels have been run, first eighteen feet long, second twenty-four feet, from which a thirty-foot cross-cut has been run, third eighteen feet, and the fourth twelve feet long, from which two cross-cuts are run in different directions thirty-two and forty-one feet long, respectively, on a line with the incline, making the incline and drift together 149 feet long, from the bottom of which is a fifteen-foot cross-cut connecting with a sixty-foot level running from the main shaft; and on the Democrat but little work, but that done showing the same ore as is found in the Wabash; improvements—whim-house, with a California Whim for hoisting ore, stable, ore and boarding houses assay-room, etc.; output 2,000 tons, the entire amount of which is in the ore-house or on the dumps ready for shipment.

**Wall Street.**—300x1500 feet; situated on the east bank of the Dolores River, and is supposed to be an extension of the Little Sadie, with similar characteristics.

**Waltham.**—300x1500 feet; situated on the west slope of Dolores Mountain, one mile east of Rico, Pioneer district; located in 1879; owners S. Enfield, M. Grigsby, Chas. Kelly, and M. A. Bean, all Rico; vein a fissure six feet wide, containing heavy spar carrying manganese, which assays fifteen ounces silver per ton; developed by one drift fifty-seven feet long.

**Whale.**—300x1500 feet; situated on the north slope of Expectation Mountain, about 2,500 feet above the Puzzle, Pioneer district; one well timbered tunnel, showing a vein about twenty inches wide containing quartz and iron.

**White Rock.**—300x1500 feet; situated on the west slope of the divide between the east and west Dolores Rivers, six and one [illegible] miles north-west of Rico, Pioneer district; located October, 1880; owners [illegible] Robinson, Julius Thompson, J. J. Cohnan, and Frank Vogely, all Ric[illegible] fissure seven feet wide, containing pockets of gray copper and galena, [illegible] ssays forty ounces silver and some gold per ton, with a quartz gangue; developed by one tunnel forty-five feet long.



**Wizard.**—300x1500 feet; situated on the west side of the Dolores River and on the east slope of Mount Elliot, one and one-fourth miles north of Rico, Pioneer district; located December, 1881; owners Beverley R. Keim, W. B. Norton, and Jno. Bissell, all Rico; vein a fissure forty inches wide, pay streak from ten to fifteen inches, composed of heavy galena with a quartz gangue, which mills fifty-five per cent lead and twenty-one ounces silver per ton; developed by one sixty-foot tunnel.

**Wood and Sheivley Group.**—Five claims, 300x1500 feet each, viz., Wauzeka, Nestor, Lilly Langtry, Hindoo, and Moscow; situated on the south slope of Telescope Mountain, two miles north-east of Rico, Pioneer district; located January, 1883; owners Franc O. Wood, Colorado Springs, and W. B. Sheivley, Rico; veins all fissures from fifteen to forty feet wide, containing quartz carrying silver and black manganese, which assays from five to ten ounces silver per ton; developed by four shafts from ten to twenty-five feet deep and one tunnel twenty-eight feet long.

**Yellowstone.**—(See Sinbad Group.)

**Zarelda Group.**—Four claims; 300x1500 feet each, viz., Zarelda, Butler, I. X. L., and Carrie; situated on the east slope of Mount Elliot, one mile north of Rico, Pioneer district; located 1879 and 1880; owners J. Q. A. Norton and James E. Watson, both Lawrence, Kas., estate of Robt. Patton (J. T. Patton, Detroit, Mich., administrator), and —— Parrish, New York City; veins all fissures from one and one-half to four feet wide, containing quartz carrying galena and carbonates in pockets, which assay twenty per cent lead and forty ounces silver per ton; developed by five tunnels, 230, 25, 40, 20, and 30 feet long, respectively.

**Zenith and Zodiac.**—Two claims, 300x1500 feet each; situated on the south slope of Mount Wilson, fifteen miles north of Rico, Pioneer district; located September, 1881; owners A. G. Dunbar, Ouray, Frank Williams, and others, Placerville; ore body appears to be a deposit of quartz carrying pockets of gold and copper sulphides, assaying from $10 to $30 per ton; developed by two shafts twenty feet deep each.

**Zilla and Zodiac.**—Two claims, 300x1500 feet; situated on the south slope of Mt. Wilson, eleven miles north of Rico, Pioneer district; located in 1881; owners W. Holcomb, H. H. Hart, Geo. Hurlburt, and J. E. Ross, all Rico; ore body appears to be a horizontal deposit ten feet thick, containing pockets and chimneys of copper pyrites, assaying from $10 to $40 per ton in gold and silver; developed by six open cuts, with a ten-foot face each.

**Zona M.**—300x1500 feet; situated on the south-west slope of Telescope Mountain, two miles north-east of Rico, Pioneer district; located in January, 1883; owners D. A. McGraw, Henry Phillippi, and J. W. Burns, all Rico; vein a fissure four feet wide, pay streak twenty-four inches, composed of carbonates in a decomposed gangue, which mills, when sorted, forty-one ounces silver per ton; developed by one tunnel sixty-two feet long.

**Zulu Chief.**—300x1500 feet; situated on the east slope of Expectation Mountain, one and one-fourth miles west of Rico, Pioneer district; located in January, 1882; owners Oscar H. Taylor and J. W. Lyon, both Rico, and T. C. Johnson, Los Angeles, Cal.; vein a fissure fifty inches wide, pay streak twelve inches, co[illegible]ng sulphurets, chlorides, and some tellurium ore in a quartz gangue [illegible]-class ore milling, when sorted, 118 ounces silver, the second-class [illegible]unces silver, and the balance of the vein eight ounces silver per ton, developed by an inclined shaft thirty-four feet deep, at the mouth of which is erected a shaft-house.

# Eagle County.

This County was created by a division of Summit, in the beginning of the present year, and is bounded on the east by Summit, on the south by Lake and Petkin, on the west by Garfield, and on the north by Grand County. It has an area of 1,850 square miles, and an estimated population of 1,000, or over, with Red Cliff as the county seat and chief center, although there are a number of other towns of less note.

Prior to its being set apart as a separate County, the territory now embraced therein had assumed quite an importance. The section immediately in the vicinity of Red Cliff, containing over a dozen mines that have been worked energetically, has, for two years past, returned large quantities of base bullion, thereby making that town a mining camp of considerable note. In 1881 the output from the properties referred to was about 6,000 tons of sorted ore, netting the owners, as near as can be ascertained, about $150,000; while in 1882, as estimated by those familiar with the subject, it advanced to 400 tons of lead bullion, and 10,000 tons of ore shipped to Leadville, netting the owners over $250,000. Although the material in this vicinity is not what might be termed high-grade (averaging from $10 to $25 per ton, after deducting the cost of transportation), yet, being of good quality for smelting, containing a heavy percentage of lead and enough silver to make it profitable, a great future can be predicted for the Red Cliff district.

In the vicinity of and at Holy Cross, quite a camp exists. The veins are strong, the quartz at the surface, and to a depth of from ten to fifteen feet, being much decomposed, below which the ores are mainly white iron pyrites, altogether yielding from $10 to $15 per ton under the stamps. The camp is however, comparatively new, but the prospects seem fair for considerable returns in the future.

**Alleghany.**—Joseph W. Groom, Red Cliff, and W. C. Needles, trustee, Leadvillee, Colo., owners; claim 675x150 feet; situated on the east slope of Battle Mountain, adjoining the Herald Mine, Battle Mountain Mining district, at Red Cliff; located in 1879; vein a contact, with a crevice from four to ten feet wide, but with no defined deposit of ore; the contact, which is of quartz, being seamed with small layers of lead carbonates, which assay from two to twenty-five ounces silver per ton developed by a tunnel 217 feet in length.

**Alpha Group.**—Joseph W. Groom, Red Cliff, Colo., owner; group comprises the Alpha, Omega, Never-sweat, Blue Wing, and Forest Rose, covering twenty-eight acres of surface ground; situated on Turkey Creek, Horn-silver and Battle Mountain Mining districts; located in 1879; veins all contacts, with crevices ranging from six to eighteen inches in width, containing an ore assaying from $2 to $25 per ton; developed by two shafts twenty feet in depth each one open cut twenty feet long, and two tunnels fifty-eight and eighty-five feet in length, respectively.



**American Mining and Smelting Company.**—Incorporated under the laws of Illinois; president, C. A. Otis, Cleveland, Ohio; vice-president and manager, F. H. Ketcham, Leadville, Colo.; secretary, H. I. Higgins, Chicago, Ill.; treasurer, Howard P. Eels, Cleveland, Ohio; office Bank of Leadville Building, Leadville, Colo.; owns the Little Chief Group of claims, consisting of the Little Chief, Comstock, and Queen of the Hill, covering thirty-one acres of surface ground; situated on Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879, and Little Chief patented; ore body is a deposit of lead carbonates and galena, varying in thickness, with a decomposed gangue; improvements—a complete plant of steam machinery; output to September, 1882, over 1,200 tons, mainly of a heavy galena ore.

**Anglo-American Mining Company (The).**—Incorporated under the laws of Illinois, in June, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, John L. Berendge; vice-president, F. F. Elenendorf; secretary, P. F. S. Slaymaker; treasurer, C. A. Boring—all Chicago; general manager, H. A. Plimpton, Red Cliff, Colo.; offices 113 Adams street, Chicago, Ill., and Red Cliff, Colo.; owns the following lodes: Rose, Emma, Union, Texas Girl, Grand Review, 1500x150 feet each, and Grand Review Mill site, five acres; situated on Horn-silver Mountain, Horn-silver Mining district, one and three-fourths miles from Red Cliff; located in 1879, and patented in 1880 and 1881; veins all contacts, with crevices from thirteen to twenty-four feet in thickness, containing some quartz carrying gold and galena, which mills, when sorted, $40 per ton; developed by 1,500 feet of tunnels, shafts, drifts, and winzes, and a stamp-mill, situated at the foot of Horn-silver Mountain, one and three-fourths miles from Red Cliff, containing ten Stamps, motive power for the same being supplied by a twelve-horse-power engine, and a double tram-way 1,000 feet long, connecting the mines with mill.

**Argyle.**—E. F. Campbell, Red Cliff, Colo., owner; claim covers two acres of surface ground; situated on Horn-silver Mountain, Horn-silver Mining district, one-fourth mile from Red Cliff; located in 1880; vein a contact, but has no regular mineral deposit, although the contact contains small layers of lead and iron carbonates, which assay twenty per cent lead and eighty ounces silver per ton; developed by a tunnel forty-two feet in length.

**Aspen and Silver.**—Walter S. Cheesman and Geo. W. Clayton, both Denver, and D. D. Belden, Red Cliff, owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-fourth miles from Red Cliff; located in 1879, and patented in 1880 and 1882; both claims are situated on the same contact, which is six feet in thickness, containing lead carbonates, which assay sixty per cent lead and from eight to twelve ounces silver per ton, with a decomposed gangue; developed by two shafts fifty feet in depth each.

**Atlantic and Denver City.**—T. McGovern, J. J. Nash, M. McCredy, and Joseph Nash, all Holy Cross City, Colo., owners; claims 1500x150 feet each; situated at Missouri Camp, Holy Cross Mining district, two and one-half miles from Holy Cross City; located in 1881; veins both fissures, with crevices from four to eleven feet wide, and pay streaks from six inches to three feet of quartz and iron pyrites carrying gold, which assay four ounces gold per ton; developed by two tunnels twenty-two and thirty-two feet in lenth, respectively.

**Aztec and Silver Standard.**—J. J. Concanon and H. P. Grey, both Red Cliff, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three and one-half miles from Red Cliff; located in 1881; veins both contacts, about thirty-five

feet in thickness, containing lead carbonates, but no well defined carbonate deposit has yet been opened up; developed by a shaft seventy-five feet in depth and a tunnel thirty-five feet in length.

**Backus.**—Daniel C. Plowman, Martin Welch, Dennis Murphy, John Farquher, and H. H. Brady, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on the south-west slope of French Mountain, Holy Cross Mining district, one-fourth mile from Holy Cross City; located in 1881; vein a fissure, containing from six to thirty inches of gold-bearing quartz, which assays from one to two and one-half ounces gold per ton; developed by an open cut thirty feet in length, with a five-and-one-half-foot face.

**Bangor and Golden Edge.**—Chas. Hohstadt, Holy Cross, and T. N. Compton, Red Cliff, Colo., owners; claims 1500x150 feet each; situated on the east slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880; veins both fissures, with crevices from four to thirty feet in width, containing quartz carrying gold, which assays three-fourths ounce gold per ton; developed by an open cut thirty-five feet in length, with a ten-foot face.

**Battle-axe.**—Robert W. Morrow, Holy Cross City, Colo., owner; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district; located in 1881; vein a fissure, with a crevice, two and one-half feet in width, of quartz carrying gold, which assays from two to six ounces gold per ton; developed by an open cut ten feet in length, with a ten-foot face.

**Bay State.**—J. J. Concanon, H. S. Mastick, both Red Cliff, Colo., owners; claim 1500x150 feet; situated in Eagle Cañon, Battle Mountain Mining district, three and one-half miles from Red Cliff; located in 1881; vein a fissure in quartzite, and has a crevice four feet in width, containing quartz and galena, which assays ten ounces silver and a trace of gold per ton; developed by a tunnel fifteen feet in length.

**Belden Mining Company (The).**—James W. Converse, Elisha D. Converse, and Eugene D. Brooks, all Boston, Mass., trustees; general manager, H. E. Armitage, Red Cliff, Colo.; owns the Belden, R. L. R., Mamie, Cora, Glenarm, and C. C. Howell lodes, covering about twenty-eight acres of surface ground; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three miles from Red Cliff; located in 1879, and the Belden, Cora, and Mamie patented; claims all situated on the same contact, containing from six inches to four feet of carbonates of lead, milling sixty per cent lead and from seven to twelve ounces silver per ton; developed by an incline 600 feet in length; worked by a fifteen-horse-power engine; output from ten to fifty tons of ore per day.

**Belle.**—Moses Corey, Holy Cross City, and John Vasser, Leadville, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district, one-half mile from Holy Cross City; located in 1881; vein a fissure, with a crevice three feet wide of gold-bearing quartz, which assays two ounces gold per ton; developed by an open cut twelve feet in length.

**Belle of the West.**—Henry Rivers, W. F. Monroe, and Michael Kerlin, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated in Missouri Camp, Holy Cross Mining district, six miles from Holy Cross City; located in 1881; vein a fissure, with a crevice four feet wide of quartz carrying gold and silver, which assays one and one-half ounces gold and thirty ounces silver per ton; developed by a shaft fourteen feet in depth.



**Berkshire Mining and Milling Company (The).**—Incorporated under the laws of New York, in June, 1882; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, Edwin N. Colt; vice-president, Joseph Bryan; secretary and treasurer, John Thompson—all Brooklyn, N. Y.; general manager, Samuel Poole, Red Cliff, Colo.; offices 712 DeKalb Ave., Brooklyn, N. Y., and Red Cliff, Colo.; owns the Minnehaha, Maggie A., and War Eagle lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879; veins all contacts, with crevices from three inches to six feet wide, containing galena and carbonates of lead, which assay $100 per ton, with a decomposed gangue; developed by a tunnel 165 feet in length in the quartzite.

**Bertie.**—N. Rollins, 303 Harrison Ave, Leadville, Colo., owner; claim 1500x150 feet; situated on Taylor Mountain, Eagle River Mining district, near El Capitan Mine, and three-fourths mile from Mitchell Station; located in 1880; vein a contact containing carbonates, which assays two ounces gold and fifteen ounces silver per ton, with a decomposed gangue; developed by a shaft twenty-three feet in depth.

**Big Sunflower.**—(See Colorado Mint and Big Sunflower.)

**Black Joe.**—(See Dutchman and Black Joe.)

**Black Metallic.**—Smith P. Brown, Leadville, Colo., and George H. Cowles, Osceola, Iowa, owners; claim 1500x150 feet; situated at Red Cliff, Horn-silver Mining district; located in 1878, and patented in 1881; vein a contact, containing argentiferous galena and gold quartz; developed by two shafts 45 and 130 feet in depth, respectively.

**Blake Consolidation Group.**—Walter S. Cheesman and Geo. W. Clayton, both Denver, and D. D. Belden, Red Cliff, Colo., owners; group comprises the Blake, Bertha, and Longfellow, covering fourteen acres; situated on the west slope of Battle Mountain, Battle Mountain Mining district, near Red Cliff; patented in 1880; vein a contact six feet in thickness, containing carbonates of lead, which mill-run sixty per cent lead and from eight to twelve ounces silver per ton; developed by an incline fifty feet in length, with some drifting and stoping; output twenty tons per day.

**Blossom Group.**—D. Jackson and H. A. Plimpton, both Chicago, Ill., and E. L. Campbell, Leadville, Colo., owners; group comprises the Blossom, Green Brier, Golden Slipper, Silver Crown, and Happy Thought lodes, 1500x150 feet each; situated on Middle Mountain, Holy Cross Mining district, one and one-half miles from Holy Cross City; located in 1880, and in process of patent; veins all fissures, with crevices from one to four feet in width, containing quartz, galena, and copper, which mill-run, when sorted, six per cent copper, one ounce gold, and thirty-five ounces silver per ton; developed by a shaft thirty feet in depth on each lode and a tunnel in the Blossom 136 feet in length.

**Calumet.**—(See Gold Park Mining Company.)

**Campbell Group.**—W. W. Cooley and John Haywood, both Red Cliff, Colo., F. C. Root, L. B. Wheat, and Saml. McMillen, all Leadville, Colo., owners; group comprises the Campbell, Elmira, and Hattie C. lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, at Bell's Camp; relocated in 1881; veins all contacts, with crevices ranging from two to twelve inches in thickness, containing carbonates, which assay ten ounces silver per ton; developed by three inclines from 30 to 114 feet in length.

**Catherine Todd.**—H. R. and W. E. McClelland, and C. Reiter, all Taylor City, Colo., and Thos. Evans, Red Cliff, Colo., owners; claim 1500x150 feet; situated on the south-east slope of Horn-silver Mountain, Horn-silver Mining district, one and one-half miles from Red Cliff; located in 1879; vein a contact, with a crevice one foot wide of galena and carbonates, which assays 700 ounces silver per ton, with a decomposed gangue-matter; developed by a tunnel 110 feet in length.

**Central Colorado Mining and Prospecting Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, —— Gunnell; secretary and treasurer, Wm. Needles—both Leadville, Colo.; general manager, L. F. Bayha, Red Cliff, Colo.; offices 114 West Chestnut street, Leadville, Colo., and Red Cliff, Colo.; owns the Humboldt claim, 1500x150 feet; situated on the east slope of Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879; vein a contact, with a crevice eight feet in thickness, containing small layers of lead carbonates, which assay thirteen per cent lead and twenty-eight ounces silver per ton; developed by a shaft 165 feet in depth and drifts ninety-two feet; worked by a twenty-horse-power engine.

**Chicago.**—Andrew Holmberg and Chas. Holm, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879; vein a contact from six inches to four feet thick, containing carbonates of lead, which assay forty per cent lead and ten ounces silver per ton; developed by a tunnel seventy-five feet in length.

**Chloride.**—C. Reiter and H. R. McClelland, both Taylor City, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879; vein a contact, with a crevice two feet wide containing carbonates, which assays from two to ten ounces silver per ton, with a decomposed gangue; developed by a tunnel eighty feet in length.

**Chloride and Anglo-Saxon.**—J. B. Taylor and C. H. Taylor, both Red Cliff, and J. H. Stimpson, San Juan, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1879; veins both contacts, with crevices from two to four feet in width, containing carbonates carrying gold and silver, which assay thirty-five per cent lead and thirteen ounces silver per ton, with a decomposed gangue; developed by a shaft twenty-six feet in depth.

**Cleopatra.**—C. L. Webb, Denver, and others, owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, adjoining the Clinton mine, and being on the same contact and containing the same quantity and quality of mineral.

**Cleveland Group.**—W. S. Cheeseman and G. Clayton, both Denver, and D. D. Belden, Red Cliff, owners; group comprises the American Flag, Cleveland, Little Topsy, and Black Iron lodes, 1500x150 feet each, except the Pappoose, a fractional claim, situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1879, and in process of patent; veins all contacts, with crevices from two to six feet in thickness, containing carbonates of lead, which mill-run from forty to sixty per cent lead and twelve ounces silver per ton; developed by two inclines 100 and 160 feet in length, respectively, and a shaft eighty-five feet in depth; output from fifty to seventy tons of ore per week.



**Clinton Group.**—Owned by James F. Mathews and C. L. Webb, both Denver, Colo.; superintendent, W. W. Burr, Red Cliff, Colo.; office 249 Sixteenth street, Denver, Colo; group comprises the Clinton, Florence, and J. Best lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879, and patented; the three claims are situated on one contact, which varies from two to ten feet in thickness, and containing carbonates of lead, which mills, when sorted, forty per cent lead, from two-tenths to three-tenths ounces gold, and from ten to nineteen ounces silver per ton; developed by a 400 foot incline, with considerable drifting, the property being worked by a twenty-horse-power engine; output fifty tons per week.

**Colorado Mint and Big Sunflower.**—Samuel Hilton, James Green, and W. H. Jones, all Taylor City, Colo., owners; claims 1500x150 feet each; situated on the west slope of Taylor Hill, Eagle River Mining district, one-fourth mile from Taylor; located in 1881, and patented; veins both contacts, with crevices about eight feet thick, containing carbonates, which mill-run one-half ounce gold per ton; developed by an incline 150 feet in length, four drifts aggregating 140 feet, and a shaft fifty feet in depth.

**Colorado Mint Stamp-Mill.**—Samuel Hilton, James Green, and W. H. Jones, all Taylor City, Colo., owners; mill situated on Taylor Hill, near Taylor City, and contains five Stamps, with facilities for erecting twenty stamps, and can treat eight tons of ore in twenty-four hours.

**Comstock.**—William Bates, Dennis Murphy, Martin Welch, and James Bakeus, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on the south slope of French Mountain, Holy Cross Mining district, one-fourth mile from Holy Cross City; located in 1882; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz, which assays from one to three ounces gold per ton; developed by a shaft sixty feet in depth and a tunnel 100 feet in length.

**Daisy and Lawn Ridge.**—Thomas, James, and Joseph Smitherum and Wm. B. Sherick, all Red Cliff, Colo., O. H. Harker and E. L. Campbell, both Leadville, Colo., owners; claims 1,500 feet in length and from 50 to 125 feet in width; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879; vein a contact, with a crevice three feet in thickness, containing carbonates, which assays four ounces silver per ton; developed by a tunnel eighty feet in length.

**Dawson Group.**—Henry Dawson, G. R. Wheeler, D. Malby, G. W. Drake, Samuel Morrissey, John Reno, John Hamnerse, Richard Holtz, C. Smidt, and Harvey Pace, all Council Bluffs, owners; J. W. Frost, Taylor City, Colo., manager; group comprises the Henry Dawson, Lotta, and L. A. O. Ella; situated on Buckeye Hill, Eagle River Mining district, three-fourths mile from Taylor City; located in 1880; veins all fissures, containing gold-bearing quartz from one to six feet in width, which mill-runs three-fourths ounce gold per ton; developed by three shafts from twenty-three to seventy feet in depth and drifts aggregating 100 feet; output fifteen tons per day.

**Dolly Varden.**—John E. Anderson, Red Cliff, Colo., owner; claim covers two and one-half acres of surface ground; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1881; vein a contact, with a crevice four feet wide, containing carbonates of lead, which assays forty per cent lead and five ounces silver per ton; developed by a tunnel thirty feet in length.

**Dolly Varden.**—Isaac H. Frye and Wm. G. Press, both Chicago, Ill., owners; claim 1500x150 feet; situated on Battle Mountain, Battle Mountain Mining district, two miles from Red Cliff; located in 1878; vein a contact containing carbonates of lead, which assays fifty per cent lead and twenty ounces silver per ton; developed by a shaft 100 feet in depth and a tunnel sixty feet in length.

**Dutchman and Black Joe.**—C. H. Taylor and —— Maxfield, both Red Cliff, Colo., and Edward Nichols, Leadville, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one-half mile from Red Cliff; located in 1879; veins both contacts, with crevices from two to four feet in width, containing carbonates carrying silver; developed by two shafts 80 and 140 feet in depth, respectively.

**E. R. Y. Group.**—L. B. Wheat, Leadville, and others, owners; group comprises the E. R. Y., Florence, and Duff Gordon lodes, 1500x150 feet each, and the Duff Gordon placer, 116 acres; situated on the north slope of Girard Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1881, and patented in June, 1882; vein a fissure, with a crevice four feet wide, through which is scattered quartz carrying g old, which assays from one to two ounces gold per ton; developed by a tunnel eighty feet in length and a shaft twenty five feet in depth.

**Eagle Bird.**—(See Silver Bullion Mining Company.)

**Eagle Bird Consolidation.**—Walter S. Cheeseman and Geo. W. Clayton, both Denver, and D. D. Belden, Red Cliff, Colo., owners; group comprises the Eagle Bird, Silver Wave, Little Nellie, Ida, and Kruse lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, near Red Cliff; located in 1879, and patented in 1880; veins all contacts from five to fifteen feet in thickness, pay streaks from six inches to three feet, containing carbonates of lead, which mill-run forty per cent lead and eight ounces silver per ton, with a decomposed gangue; developments—an incline 450 feet long on the Silver Wave claim opens up the entire group, and drifts aggregating 2,500 feet; worked by a thirty-horse-power engine; output over 3,000 tons of ore; the owners have, for the better facility of shipping, built a tram-way 1,100 feet in length, connecting the mines with the railroad.

**Eagle Consolidated Placer.**—Wm. Cooley, Red Cliff, L. B. Wheat and A. D. Searle, both Leadville, Colo., owners; claim embraces 2,002 acres of land; situated on the north slope of Girard Mountain, Battle Mountain Mining district, one mile from Red Cliff; located in 1882, and patented September, 1882; developed by 1,000 feet of ditching, with some other workings.

**Eclipse and Eureka.**—T. H. Webster and J. Q. Thomas, both Red Cliff, Wm. A. Addis, Emporia, Kansas, and Wm. Temby, Ogden, Iowa, owners; claims cover nine acres; situated on the west slope of Battle Mountain, Battle Mountain Mining district, adjoining the Kingfisher mines, two and one-half miles from Red Cliff; located in 1879, and patented in 1881; both claims situated on the same contact, the latter having a crevice five feet in thickness, containing galena and gold-bearing quartz, which assays ten per cent lead, one ounce gold, and thirty ounces silver per ton; developed by a shaft eighty feet in depth and a tunnel thirty feet in length.

**El Capitan Group.**—G. Eisenbeis, F. W. Gerdis, and Edward Warny, Pittsburgh and Alleghany City, Pa., owners; group comprises the El Capitan, Ermine, Alice, Shoestring, Jay Jay, Agei, and Phœnix lodes, covering from twenty-five to thirty acres of ground; situated on the west slope of Taylor Hill, Eagle River Mining district; located in 1879; purchased by present owners in 1882; Agei, Jay Jay, and Phœnix patented, and others in process of patenting; veins all contacts, with a mineral streak ranging from two to fifteen feet in thickness, and containing a carbonate ore, which mill-runs, in gold and silver, from $25 to $50 per ton; developed by an incline 100 feet in length and drifts aggregating over 200 feet; all well timbered; ore in sight—several hundred tons, and the present output from ten to twenty tons per day.



**Erie.**—(See Gold Park Mining Company.)

**Evergreen.**—T. J. Rinker, G. D. Lyles, and P. H. King, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1881; vein a fissure, containing fifteen inches of gold-bearing quartz, which assays three ounces gold per ton; developed by a shaft twelve feet in depth.

**F. C. Garbutt.**—Chas. J. Moore, Price Mirick, Frank A. Malins, and Ernest V. Orford, owners; office Rooms 10 and 12, 405 Harrison Avenue, Leadville, Colo.; claim 1500x150 feet; situated on Battle Mountain, Battle Mountain Mining district, at Red Cliff; patented in July, 1882; vein a contact, with a crevice from one to three feet wide, containing carbonates and galena, which mill-runs fifty per cent lead and fifteen ounces silver per ton, with a decomposed gangue; developed by a tunnel 120 feet in length.

**First Chance Group.**—D. Jackson and H. A. Plimpton, both Chicago, Illinois, and others, owners; offices 168 La Salle street, Chicago, Illinois, and Red Cliff, Colo.; group comprises the First Chance, Hercules, and Harry Clay lodes, 1500x150 feet each; situated on French Mountain, Holy Cross Mining district; located in 1880, and Hercules patented in 1881; veins all fissures, with crevices from four to seven feet wide, and pay streaks from eight inches to three feet, containing quartz carrying gold, which mill-runs from one and one-half to three ounces gold per ton; developed by three shafts, fifteen, thirty, and seventy feet in depth, respectively, and a tunnel fifty feet in length; output twenty-five tons.

**Florence.**—(See Clinton Group.)

**Foster and Fraction.**—W. B. Sherick and Joseph Smitherum, both Red Cliff, Colo., George Foster and John Nichols, both Nevadaville, Colo., owners; Foster 1500x150 feet, fraction 1500x14 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one-fourth mile from Red Cliff; located in 1879; veins both contacts, with crevices from one to three feet wide, containing carbonates of lead, which assay forty per cent lead and twenty ounces silver, per ton, with a decomposed gangue; developed by two tunnels fifty and sixty feet in length, respectively.

**Fox and Rattlesnake.**—Two claims, 150x1500 feet each; situated on Bruce Mountain, Horn-silver district; patented in August, 1882; owners Max Boehmer and John A. Smith, both Leadville; developments—one 200-foot tunnel, with a twenty-foot winze, showing some lead carbonates carrying silver.

**Garbutt.**—(See F. C. Garbutt.)

**Garfield.**—(See Gold Park Mining Company.)

**George H., Searsport, and Emma Sargent.**—W. H. Matthews & Co., Leadville, Colo., owners; claims 1500x150 feet each; situated on Summit Hill, Eagle River Mining district; located in 1880; veins all contacts, containing carbonates carrying gold and silver; developed by three shafts from 25 to 115 feet in depth each.

**Gibraltar Group.**—Harrison Berry, Red Cliff, Colo., Henry M. Teller and Willard Teller, both Denver, Colo., N. W. Dickerson and L. W. Green, both Leadville, Colo., owners; group comprises the Gibraltar, Charter Oak, Compton, and Blackstone lodes, 1500x150 feet each; situated on Horn-silver Mountain, Horn-silver Mining district, two and one-half miles from Red Cliff; located in 1879, and in process of patent; vein a contact, with crevice about eight feet wide, and a pay streak from six to eighteen inches, containing horn-silver and galena, which assays three per cent lead and seventy-five ounces silver per ton; developed by four tunnels, 130, 135, 140, and 150 feet in length, respectively.

**Glen View and Daisy.**—T. J. Rinker, John Monroe, and G. D. Lyles, all Holy Cross City, Colo., owners; claims 1500x150 feet each; situated on French Mountain, Holy Cross Mining district, three-fourths of a mile from Holy Cross City; located in 1881; veins both fissures, with crevices four feet in width, and pay streaks from six to eighteen inches of gold-bearing quartz, which assay three ounces gold per ton; developed by two shafts twenty feet in depth each.

**Gold Park Mining Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, John W. Bailey, Denver, Colo.; secretary and treasurer, W. J. Osborn, New York City; superintendent, W. W. Turney, Holy Cross City, Colo.; offices Room 62 Drexel Building, New York City, and Holy Cross City, Colo.; owns the following lodes: Calumet, Little Mollie, Delphine, Blade, Horseshoe, and Hidden, adjoining each other on the Calumet vein and covering twenty-five acres of surface ground; Calumet, Little Mollie, and Delphine patented; vein runs through the center of French Mountain, in Holy Cross Mining district, and averages seven and one-half feet in width of quartz carrying gold, which mill-runs an average of one and one-half ounces gold per ton; property developed by two tunnels 100 feet apart and connected by shaft, the upper one being 178 feet in length and lower one 300 feet in length, and connected with an ore-house by 200 feet of tram-way; output 1,500 tons of ore, and can produce fifty tons of ore per day; Pelican, Pelican Extension East and West, Golden Circle, Golden Cross, and Webb covering twenty-two acres, and adjoining each other on the Pelican vein; situated on the north slope of French Mountain, Holy Cross Mining district; located in 1880, and the Pelican and Pelican Extensions patented in 1882; vein a fissure five feet wide, containing quartz carrying gold, which mill-runs from one to three ounces gold per ton; Pelican developed by a shaft eighty feet in depth, an open cut 150 feet in length, with twenty-five-foot face, and two drifts on the vein thirty-five feet each in length; Pelican Extension by two open cuts 100 feet in length each; Golden Cross and Golden Circle by two shafts thirty and fifty feet in depth, respectively; output 300 tons of ore; worked by a fifteen-horse-power engine; the Erie lode, 1500x150 feet; situated on the north slope of French Mountain, Holy Cross Mining district, at Holy Cross; located in 1880; vein a fissure, with a crevice seven feet wide, containing quartz carrying gold, which mill-runs one-half ounce gold per ton; developed by an open cut twenty feet in length; output 150 tons of ore; the Garfield, Nasby, Keystone, and Hancock, four adjoining claims on the Garfield vein, 1500x150 feet each; situated on the north slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880; vein a fissure six feet wide, containing gold-bearing quartz, which mill-runs three-fourths ounce gold per ton; developed by an open cut 150 feet in length and four shafts ranging from ten to twenty feet in depth; output about 300 tons; the Golden Edge and Royal, two adjoining claims on the Golden Edge vein, 1500x150 feet each; situated on the north slope of French Mountain, Holy Cross Mining district; located in 1881; vein a fissure two feet in width, containing gold-bearing quartz, which mill-runs one ounce gold per ton; developed by a shaft twenty feet in depth and an open cut fifteen feet in length; output thirty tons; the Mountain Quail lode, 1500x150 feet; situated on the north slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880; vein a fissure, with a crevice one foot wide, containing gold bearing quartz, which mill-runs three ounces gold per ton; developed by an open cut fifteen feet in length, with a fifteen-foot face; the Grand Trunk, Eureka, Chamois, and Hope, four adjoining claims on the same vein, covering eighteen acres; situated on the south slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880 and 1881; vein a fissure six feet wide, containing gold-bearing quartz, which mill-runs three ounces gold per ton; Grand Trunk developed by a shaft eighty feet in depth and a tunnel 200 feet in length; Eureka, Chamois, and Hope by shafts and open cuts from ten to thirty feet; output 200 tons; the Napoleon lode, 1500x150 feet; situated on the north slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880; vein a fissure, with a crevice two feet wide, containing quartz carrying gold, which mill-runs three-fourths ounce gold per ton; developed by an open cut ten feet in length, with a fifteen-foot face; the Grand View lode, 1500x150 feet; situated on the north slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880; vein a fissure, with a crevice ten feet wide, and a pay streak from six to twenty inches, containing quartz and iron pyrites carrying gold, which mill-runs one ounce gold per ton; developed by an open cut thirty feet long on the vein; the Gold Park Tunnel site, 3000x6 feet; situated on the north slope of French Mountain, Holy Cross Mining district; located in 1880; on which a tunnel is driven 150 feet in length, and it is the purpose of the Company to open up and develop through it the Grand View, Garfield, Pelican, Golden Edge, Calumet, and Grand Trunk veins, the first of which it will cut at a depth of 500 feet from the surface, the Garfield at 600 feet, the Pelican at 700 feet, the Golden Edge at 900 feet, the Calumet at 1,300 feet, and the Grand Trunk at 1,200 feet.

Also owns and operates two mills for the treatment of their own ore, one situated at Holy Cross City, containing the Baily and De Ferganier Grinding Machines, and Roasting and Desulphurizing Furnaces, especially adapted for the treatment of these ores, and has capacity for treating sixty tons in twenty-four hours, motive power for the same being supplied by a seventy-five-horse-power engine, and the other, a stamp-mill, built by Fraser & Chalmers, Chicago, and stamp-mill situated at Gold Park, containing twenty Stamps, and has capacity for treating twenty-five tons per day, both mills are connected by iron flume two and one-half miles in length, which carries the ore from the mines and mill at Holy Cross Mountain to the mill at Gold Park; the Company owns two placers of forty acres each at Holy Cross City.

**Gold Stripe.**—Moses Corey, Holy Cross City, and Geo. Milner, Leadville, Colo., owners; claim covers four and one-half acres of ground; situated at Camp Fancy, Holy Cross Mining district, two miles from Holy Cross City; located in 1882; vein a fissure, with a crevice eight feet wide, containing quartz carrying some gold; developed by a shaft twenty feet in depth.

**Golden Comet Mining Company (The).**—Incorporated under the laws of Illinois in 1879; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, R. C. Price; vice-president and treasurer, W. G. Gress; secretary, J. H. Avery—all Chicago, Ill.; office 137 Madison street, Chicago, Ill.; owns six claims, 1500x150 feet each; situated on the south slope of Battle Mountain, Battle Mountain Mining district; located in 1879, and patented; veins all contacts, with crevices of varying width, contain-

ing quartz carrying gold and carbonates, which mill-run two ounces gold and eight ounces silver per ton; developed by seven tunnels from 25 to 200 feet in length and two shafts from twenty-five to eighty feet in depth; and a mill site of five acres near the lode claims.

**Golden-wave, New York, and Chicago Girl.**—Three claims, 150x1500 feet each; situated on Notch or Bear Mountain, ten miles from Red Cliff, Holy Cross district; located in September, 1881; owners G. G. White, J. N. Stevens, Peter Murtough, and others, all Leadville; veins all fissures, containing quartz and iron pyrites carrying gold, which assay from $15 to $50 per ton; developed by two tunnels fifty and thirty feet long, respectively, and two shafts ten and eighteen feet deep respectively.

**Golden-wave Stamp-Mill.**—Adjoining the Goden-wave property, ten miles from Red Cliff; building 48x60 feet, containing ten Stamps, two Batteries, and a twenty-five-horse-power engine and boiler; capacity ten tons per day; owners G. G. White, J. N. Stevens, Peter Murtough, and others, all Leadville.

**Great Eastern and Fancy.**—F. A. Malins, J. Q. Thomas, and A. Helm, all Red Cliff, D. A. Mills and T. H. Webster, both Leadville, and M. Halbert, Colorado Springs, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three and one-half miles from Red Cliff; located in 1879, and patented in 1882; vein a contact, carrying some carbonates of lead, although no defined body has been discovered; developed by one shaft 153 feet in depth.

**Green Bolt.**—John E. Anderson, Red Cliff, Colo., Chas. Wright, John Wright, and C. W. Reder, all Leadville, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three-fourths mile from Red Cliff; located in 1879; vein a contact, containing six inches of lead carbonates in a decomposed gangue, which mill-runs, when sorted, twenty-five per cent lead and forty ounces silver per ton; developed by a tunnel ninety feet in length and a drift thirty feet long.

**Halo.**—T. L. Davis, Peter Erickson, and Overton Howard, all Kokomo, Colo., owners; claim 1500x150 feet; situated on the south-west slope of Elk Mountain, Eagle River Mining district, six miles from Kokomo; located in 1882; vein a contact, with deposits of carbonates of lead and galena, with a decomposed gangue, which assays from twenty-five to fifty per cent lead and from seven to twenty ounces silver per ton; developed by an incline sixty-five feet in length.

**Hamburg Group.**—Niels Ereckson, August Anderson, David Blair, and James Richards, all Red Cliff, Colo., owners; group comprises the Hamburg, Liza, Summit, Washington, Triangle, and Last Chance lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879; veins all contacts, with crevices from six to twenty-four inches wide, containing carbonates of lead, which assay from ten to thirty ounces silver per ton, with a decomposed gangue; developed by two tunnels 100 and 180 feet in length, respectively.

**Hancock and Garfield.**—Philip Shearer and J. N. Clifford, both Taylor City, Colo., owners; claims 1500x150 feet each; situated on the west slope of Buckeye Mountain, Eagle River Mining district, one-fourth mile from Taylor City; located in 1880; vein a contact, with a crevice four feet wide, containing a decomposed contact-matter carrying gold and silver and carbonates; developed by three shafts, ten, fifteen, and thirty feet in depth.



**Hayden Consolidated Mining Company (The).**—J. W. Groom, Red Cliff, Colo., manager; owns the Hayden, Little Maud, Little Ruby, Major Hayden, and Tall Timber lodes, covering twenty-four acres of surface ground; situated on Taylor Mountain, Eagle River Mining district, near Taylor City; located in 1881; vein a contact from six inches to three feet wide, containing gold-bearing quartz, which assays $9 per ton; developed by a tunnel 100 feet in length and a shaft twenty-eight feet in depth.

**Heckla.**—Jeremiah Collins, New York City, owner; P. J. Collins, Holy Cross City, Colo., manager; claim 1500x150 feet; situated on the east slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880, and patented in 1881; vein a fissure, with a crevice thirty-two feet wide, and a pay streak from one to five feet, containing gold-bearing quartz, which mill-runs from $30 to $50 per ton; developed by two shafts twenty and thirty feet in depth, respectively; output 100 tons.

**Hercules.**—(See First Chance Group.)

**Hidden Treasure.**—R. W. McQuilkin and John Welsh, both Red Cliff, Colo., owners; claim 1500x150 feet; situated at Rock Creek, and on the west slope of Battle Mountain, Battle Mountain Mining district; located in August, 1879; vein a contact, four and one-half feet in thickness, containing quartzite and galena, which mill-runs, when sorted, fifteen per cent lead and twenty-four ounces silver per ton; developed by a tunnel forty feet in length.

**Highland Mary.**—L. A. Knutson, Red Cliff, Colo., F. H. Sheppard, Leadville, Colo., and C. B. Rustin, Idaho, owners; claim 1500x150; situated on the west slope of Battle Mountain, Battle Mountain Mining district, two and one-half miles from Red Cliff; located in 1879; vein a contact, with a crevice from five to fourteen feet wide, containing quartz carrying galena and sulphurets, which assays one ounce gold and 120 ounces silver per ton; developed by three tunnels aggregating 350 feet in length.

**Hiram and Tip-top.**—Chas. Hohstadt and T. V. Compton, both Holy Cross City, Colo., owners; claims 1500x150 feet each; situated in Jim Emerson Gulch, Holy Cross Mining district, near Holy Cross City; located in 1880; veins both fissures, with crevices from one to three feet wide, containing gold-bearing quartz, which assays one-half ounce gold per ton; developed by two open cuts twenty feet in length each.

**Holy Cross Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois, in January, 1882; president, H. C. Culver; vice-president, Samuel L. Currier; secretary, C. M. Bishop; treasurer, H. C. Culver—all Chicago, Ill.; general manager, A. R. Brown, Red Cliff, Colo.; owns the Holy Cross lode, 1500x150 feet; situated at Holy Cross City Holy Cross Mining district; located in 1880, and in process of patent; vein a fissure, with a crevice three feet wide, containing quartz and iron pyrites with gold, which assays two ounces gold per ton; developed by a tunnel forty-five feet in length and three open cuts from fifteen to sixty feet in length and five feet in depth; the Kansas Chief lode, 1500x150 feet; situated at Camp Fancy, on Fancy Creek, Holy Cross Mining district; located in 1880 and patented in 1882; vein a fissure, with a crevice twenty-six feet wide, and a pay streak from one to three feet, composed of quartz and iron pyrites carrying gold; developed by three open cuts, thirty, thirty-five, and forty feet in length, respectively, with an eight-foot face; and the Gold Star lode, 1500x150 feet; situated near Camp Fancy, Holy Cross Mining district, and near Holy Cross City; located in 1880; vein a fissure, with a crevice seven feet wide, containing quartz and iron pyrites carrying gold, which mill-runs one ounce gold per ton; developed by a tunnel forty feet in length and two open cuts seven feet in depth each.

**Home-stake Group.**—Wm. H. Dougherty, H. H. Brady, both Holy Cross, Colo., and John Sheppard, Leadville, Colo., owners; group comprises the Home-stake, Coney, and Bradford lodes, 1500x150 feet each; situated on Holy Cross Mountain, Holy Cross Mining district; located in 1880; vein a fissure, with a crevice two and one-half feet wide, containing gold bearing quartz, which assays two ounces gold per ton; developed by three open cuts twenty-five feet in length each.

**Humboldt.**—(See Central Colorado Mining and Prospecting Company.)

**Hunkidori and Hunkidori No. 2.**—Henry Marsh, David Foultz, W. A. Ellis, and J. Marshall, all Leadville, Colo., owners; claims 1500x150 feet each; situated at Holy Cross, Holy Cross Mining district; located in 1880; veins all fissures, with crevices about three feet wide, and pay streaks from six inches to two feet, containing gold-bearing quartz, which mill-runs from three to twenty ounces gold per ton; developed by a tunnel seventy-five feet in length and a shaft fifty-seven feet in depth; output about 100 tons.

**Huron.**—J. Hoskins, H. Landre, and John Monroe, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district, one-half mile from Holy Cross City; located in 1882; vein a fissure, with a crevice four feet wide, containing gold-bearing quartz; developed by a shaft twenty feet in depth.

**Ida and Christiana.**—Chas. Holm, Christiana Holm, and Jos. W. Groom, all Red Cliff, Colo., owners; claims 1500x150 feet each; situated on Willow Creek, Battle Mountain Mining district, three-fourths of a mile from Red Cliff; located in 1880; veins both contacts, with crevices of varying width, containing a carbonate ore; developed by two shafts twenty feet in depth each.

**Indian Girl.**—Samuel Bailey, Red Cliff, Colo., owner; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, two miles from Red Cliff; located in 1879; vein a contact two feet in thickness, containing carbonates of lead, which mill-runs from thirty to fifty per cent lead and from ten to fifteen ounces silver per ton, when sorted from the decomposed gangue-matter; developed by a shaft fifty-four feet in depth and a drift seventy-five feet in length; output about eighty tons.

**Iron Mask and Little Belle.**—James Burnell, Denver, Colo., owner; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, near Red Cliff, and patented; vein a contact of varying width, containing carbonates of lead, but no well defined carbonate deposit has yet been opened; developed by a tunnel ninety feet in length.

**Katie S.**—Geo. J. Stafford, J. T. Holden, and Charles H. Clark, all Red Cliff, Colo., owners; claim 1500x150 feet; situated on Notch Mountain, Holy Cross Mining district, three miles from Holy Cross City; located in 1881; vein a fissure, with a crevice ten feet wide, and a pay streak from ten to twenty inches, containing quartz with iron pyrites and galena, carrying gold and silver, which mill-runs one-half ounce gold and twenty-six ounces silver per ton; developed by a tunnel fifty feet in length.

**Keystone Consolidated Mining Company (The).**—Incorporated under the laws of Wisconsin, January 7, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Nathaniel McBride, Morris, Illinois; vice-president, C. D. Hooker; secretary, J. B. Crane; treasurer, W. W. Todd—all Chicago, Illinois; superintendent, E. F. Brewster, Red Cliff, Colo.; offices 155 Washington street, Chicago, Illinois, and Red Cliff, Colo.; owns the Keystone Group, twelve claims, covering eighty acres; situated on Horn-silver Mountain, Horn-silver Mining district; located in 1878, and patented in 1881; veins all contacts, with crevices from four to six feet in width, and pay streaks from six inches to three feet, containing galena, horn-silver, and carbonates of lead, which assay from 50 to 500 ounces silver per ton, with a quartz and decomposed gangue; developed by a tunnel 200 feet in length.



**Kingfisher.**—1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain district, two and one-half miles from Red Cliff; vein a contact, varying in thickness from two to six feet, and containing galena and gold-bearing quartz, milling, when sorted, about ten per cent lead, thirty ounces silver, and one ounce gold per ton; property is fairly developed and has had a considerable output.

**Lafayette Group.**—W. F. Monroe, Holy Cross City, Wm. Nottingham and L. McMullen, both Red Cliff, Colo., owners; group comprises the Lafayette, Grand View, and Davenport lodes, 1500x300 feet each; situated on French Mountain, Holy Cross Mining district, one-half mile from Holy Cross City; located in 1880; veins all fissures, with crevices from three to four feet wide, containing gold-bearing quartz; developed by a shaft twenty feet in depth and a tunnel twenty feet in length.

**Lancaster.**—J. J. Concanon, Red Cliff, Colo., owner; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one-half mile from Red Cliff; located in 1879; vein a contact, with a crevice twelve feet wide, and a pay streak from two to eight inches, containing carbonates of lead, which assays fifteen ounces silver and trace of gold per ton, with a decomposed gangue; developed by two shafts forty and seventy-five feet in depth, respectively.

**Last Chance.**—G. A. Hohstadt and W. D. Hardy, both Holy Cross City, Colo., owners; claim 1500x150 feet; situated on the south slope of French Mountain, Holy Cross Mining district, one-half mile from Holy Cross; located in 1882; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz, which assays two ounces gold per ton; developed by an open cut fifteen feet in length, with a nine-foot face.

**Lawn Ridge.**—(See Daisy and Lawn Ridge.)

**Little Chief Group.**—(See American Mining and Smelting Company.)

**Little Mollie No. 2 Group.**—Joseph G. Gilpin, Holy Cross City, Colo., Warner Goodrich, Red Cliff, and Willis Goodrich, Taunton, Mass., owners; group comprises the Little Mollie No. 2, Franklin, Richmond, and Brandon lodes, 1500x150 feet each; situated at Holy Cross City, Holy Cross Mining district; located in 1881; veins all fissures, with crevices from two to four feet wide, and pay streaks from four inches to two feet, containing gold-bearing quartz, which mill-run one and one-eighth ounces gold per ton; developed by five shafts ten feet in depth each and an open cut thirty-five feet in length.

**Little Nellie.**—(See Eagle Bird Consolidation.)

**Londonderry Group.**—G. Smyth, C. H. Canning, and James Robinson, all Holy Cross City, Colo., owners; group comprises the Londonderry, Moss Rose, and Little Charlie lodes, 1500x150 feet each; situated in Missouri

Camp, Holy Cross Mining district; located in 1881 and 1882; veins all fissures, with crevices from one to four feet wide, and pay streaks from six to twenty inches, containing gold-bearing quartz, which assay one and one-half ounces gold and three and one-half ounces silver per ton; developed by two open cuts twelve feet long each and a shaft eight feet in depth.

**Malin.**—G. Smyth, C. H. Canning, and James Robinson, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated at Missouri Camp, Holy Cross Mining district, five miles from Holy Cross City; located in 1881; vein a fissure, with a crevice two and one-half feet wide, containing gold-bearing quartz, which assays from one and one half to three ounces gold per ton; developed by a shaft twenty feet in depth.

**Mammon.**—(See United States and Mammon.)

**Mammoth Group.**—Eric Evanson and Thomas George, both Leadville, Colo., owners; group comprises the Mammoth, Mountain-lion, Ground-hog, Witch, and Coyote lodes, 1500x150 feet each; situated on Turkey Creek and on Battle Mountain, Battle Mountain Mining district; located in 1879; veins all contacts, with crevices from one to four feet wide, containing carbonates of lead, which assay one-half ounce gold and six ounces silver per ton, with a decomposed gangue; developed by a tunnel 105 feet in length and five other tunnels from twenty-five to thirty feet in length each.

**Manchester.**—A. B. Chapman and D. W. Smart, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on the east slope of French Mountain, Holy Cross Mining district, one-half mile from Holy Cross City; located September 2, 1882; vein a fissure five feet in width, pay streak five inches, containing galena and gold-bearing quartz; developed by a shaft twenty feet in depth.

**Matchless.**—H. Condon, H. Landre, J. T. Hoskins, and John Monroe, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district; located in 1882; vein a fissure, with a crevice from three to four feet wide, containing gold-bearing quartz; developed by an open cut twelve feet in length.

**May Queen.**—(See Mexican Maid and May Queen.)

**May Queen.**—J. B. Taylor and C. H. Taylor, both Red Cliff, Colo., J. H. Stimpson and S. W. Peeples, both San Juan, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1879, and patented in 1880; vein a contact, with a crevice twenty-seven feet wide, containing from six to twelve inches of carbonates of lead, which assays forty per cent lead and thirty-seven ounces silver per ton, with a decomposed gangue; developed by a shaft fifty-six feet in depth and a drift seventy-five feet in length.

**Mexican Maid and May Queen.**—W. S. Cheeseman, G. W. Clayton, both Denver, and D. D. Belden, Red Cliff, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1879, and patented in 1880; veins both contacts, with crevices from one to five feet wide, containing carbonates of lead, which mill-run forty per cent lead and twenty ounces silver per ton, when sorted from the gangue-matter; developed by a shaft fifty-five feet in depth and a drift on the contact sixty feet in length.

**Micawber.**—W. E. McClelland, H. R. McClelland, and C. Reiter, all Taylor Hill, J. C. Helm, Colorado Springs, and Frank Hoffmaster, Leadville, Colo., owners; claim 1500x150 feet; situated on the west slope of Taylor Hill, Eagle Mining district; located in 1881, and in process of patent; vein a contact, with a crevice from two to six feet wide, containing gold quartz, which assays one ounce gold per ton; developed by two shafts twenty-seven and forty feet in depth, respectively.



**Middle Mountain Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, L. L. Bond; vice-president, Chas. Huntington; secretary and treasurer, D. Jackson—all Chicago, Ill.; general manager, H. A. Plimpton, Red Cliff, Colo.; offices 164 Dearborn street, Chicago, Ill., and Red Cliff, Colo.; owns the following lodes: Sophie, Mountain Boy, Mayflower, Silver Star, Emerald, and Crown Point, 1500x150 feet each; situated on Middle Mountain, Holy Cross Mining district, one and one-half miles from Holy Cross City; veins all fissures, with crevices from six to fifteen feet in width, containing quartz carrying galena and copper pyrites, assaying five per cent copper, two ounces gold, and twenty ounces silver per ton; developed by a tunnel on the vein forty-five feet long and thirty feet of cross-cuts, with some other workings.

**Mono Group.**—A. B. Chapman, Red Cliff, Colo., Hugh Henry Leadville, Colo., and Chas. P. Sivigert, Springfield, Ill., owners; group comprises four claims, 1500x150 feet each; situated on the south-west slope of Horn-silver Mountain, Horn-silver Mining district, three miles from Red Cliff; located in 1879, and in process of patent; veins all contacts from three to five feet in thickness, containing carbonates carrying gold and silver, with a decomposed gangue; developed by a tunnel 264 feet in length, with some other workings.

**Morgan Group.**—Walter S. Cheeseman, Geo. W. Clayton, both Denver, and D. D. Belden, Red Cliff, Colo., owners; group comprises the Morgan, Jenny Lind, Rob Roy, Little Ella, Battle Mountain, Little Chicago, Bird, and Louise lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, one and one-half miles from Red Cliff; located in 1879, and patented in 1881; vein a contact six feet in thickness, containing carbonates of lead with a decomposed gangue, which mill-runs, when sorted, sixty per cent lead and from eight to fifteen ounces silver per ton; developed by eight inclines from 30 to 100 feet in length, with some other workings.

**Morning Star.**—Melvin Edwards, Red Cliff, Colo., C. A. Wright and J. L. Reitter, both Leadville, Colo., owners; claim 1500x150 feet; situated on the west slope of Horn-silver Mountain, Horn-silver Mining district, two and one-half miles from Red Cliff; located in 1879; vein a contact of varying width, containing lead carbonates and horn-silver, which assays forty per cent lead and seventy-five ounces silver per ton, with a decomposed gangue; developed by a shaft fifty feet in depth.

**Moss Rose.**—(See Londonderry Group.)

**Mountain Boy.**—(See Middle Mountain Mining Company.)

**Mountain-Eagle.**—Andrew Holmberg, Chas. Holm, and James Smitherum, all Red Cliff, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, adjoining the Salurian mine, Battle Mountain Mining district; located in 1879; vein a contact, with a crevice from six inches to two feet thick, containing carbonates of lead, which assays from six to ten ounces silver per ton, with a decomposed gangue; developed by a shaft 120 feet in depth, with some other workings.

**Mountain-Lion.**—(See Mammoth Group.)

**Napoleon.**—Andrew Holmberg and Chas. Holm, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on Battle Mountain, Battle Mountain Mining district, five miles from Red Cliff; located June 28, 1879; vein a contact, containing two inches of carbonates of lead, which assays fifty per cent lead and thirty ounces silver per ton, with a decomposed gangue; developed by a tunnel eighty-six feet in length.

**New-Year's.**—John E. Anderson and Chas. Johnson, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three-fourths mile from Red Cliff; located in 1881; vein a contact, with a crevice four feet thick, containing carbonates of lead, which assays fifty ounces silver per ton, with a decomposed gangue; developed by an incline fifty feet in length.

**Newton Group.**—Frederick Gordon and Wm. Mulvaugh, both Holy Cross City, Emerson Gee and A. R. Dodge, owners; group comprises the Newton, Roberts, and Lincoln lodes, 1500x150 feet each; situated in Missouri Camp, two miles from Holy Cross City; located in 1878 and 1881; veins all fissures, with crevices from three to twenty feet wide, containing quartz carrying gold and silver, which assay one-half ounce gold and from twenty to sixty ounces silver per ton; developed by a tunnel twenty-six feet in length and two shafts twenty and twenty-four feet in depth, respectively.

**No Name.**—Wm. H. Dougherty and others, Holy Cross City, Colo., owners; claim 1500x150 feet; situated near Gold Park, Holy Cross Mining district; located in 1881; vein a fissure, with a crevice from one to four feet wide, containing gold-bearing quartz, which assays one and one-fourth ounces gold per ton; developed by a shaft twenty feet in depth.

**Octoroon.**—Samuel Moninger, T. A. Hawley, N. L. Eby, and R. W. McQuilkin, all Red Cliff, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, near the Little Chief mine, Battle Mountain Mining district, three miles from Red Cliff; located in 1879; vein a contact, with a crevice two feet wide, containing carbonates of lead, which assays fifty per cent lead and from 30 to 100 ounces silver per ton, with a decomposed gangue; developed by a shaft 115 feet in depth, with some other workings.

**Ohio Boy.**—H. R. McClelland, Taylor City, Colo., owner; claim 1500x150 feet; situated on the west slope of Taylor Hill, Eagle River Mining district; located in 1879, and patented in 1882; vein a contact, with a crevice eight feet thick, containing carbonates, which mill-runs three-fourths of an, ounce gold per ton, with a decomposed gangue; developed by four shafts, forty sixty, forty-three, and eighteen feet in depth, respectively; output fifty tons.

**Onondago Group.**—L. F. Bayha, Red Cliff, Colo., and John R. Vance, Missouri., owners; group comprises the Onondago, Germania, and Schiller lodes, 1500x150 feet each; situated on the east slope of Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879; veins all contacts, with crevices from two to four feet wide, containing traces of carbonate ore, which assay thirty per cent lead and thirty-two ounces silver per ton, with a decomposed gangue; developed by a tunnel 192 feet in length and a winze twenty-eight feet in depth.

**Panther.**—L. F. Bayha, Red Cliff, Colo., and John R. Vance, Missouri. owners; claim 1500x110 feet; situated on the south-west slope of Horn-silver Mountain Horn-silver Mining district, one mile from Red Cliff; located in 1879; vein acontact, with a crevice from seven to ten inches wide, containing some carbonates of lead, which assays forty-two ounces silver per ton; developed by a tunnel sixty-two feet in length.



**Pay-roll Group.**—D. Jackson, H. A. Plimpton, and L. L. Bond, all Chicago, Ill., owners; offices 168 La Salle street, Chicago, Ill., and Red Cliff, Colo.; group comprises the Pay-roll, Inconstant, Silver Wings, and Silver Slippers, 1500x150 feet each; situated on Middle Mountain, Holy Cross Mining district, one mile and a half from Holy Cross City; located in 1880; veins all fissures, with crevices from three to eight feet wide, containing quartz and iron pyrites carrying gold; developed by a shaft thirty feet in depth and a tunnel fifty feet in length.

**Pelican.**—(See Gold Park Mining Company.)

**Pennsylvania.**—H. O. Tinstman, Pittsburgh, Pa., owner; H. R. McClelland, Taylor City, Colo., manager; claim 1500x150 feet; situated on the west slope of Taylor Hill, Eagle Mining district, at Taylor City; located in 1881, and in process of patent; vein a contact, with a crevice fourteen feet wide, containing carbonates, which assays two ounces silver per ton, with a decomposed gangue-matter; developed by a shaft fifty-five feet in depth and a drift forty-five feet in length; output seventy-five tons.

**Peru.**—J. S. Johnson, J. W. Smith, Alexander Johnson, and James Nelson, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district; located in 1881; vein a fissure, with a crevice three feet wide, containing gold and silver bearing quartz, which assays one and one-half ounces gold and twelve ounces silver per ton; developed by a shaft fifteen feet in depth.

**Pilot Temple Gold Mining Company (The).**—Incorporated under the laws of Colorado in September, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and treasurer, N. Rollins; vice-president, Henry H. Tuttle; secretary, Samuel K. Hall; general manager, John W. Myers—all Leadville, Colo.; office Room 8, 303 Harrison Avenue; owns the Pilot Temple lode, 1500x150 feet; situated on the west slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1882; vein a fissure, with a crevice six feet wide, containing quartz carrying gold, which assays from one to three ounces gold per ton; developed by an open cut forty feet in length and a shaft twelve feet in depth.

**Pioneer.**—O. R. Fluke and J. D. McPherson, both Leadville, Colo., William Mix and D. W. Rees, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on Horn-silver Mountain, Horn-silver Mining district, one and one-fourth miles from Red Cliff; located in 1879; vein a contact, with a crevice five feet wide, containing carbonates carrying silver and gold, which assays one and one-half ounces gold and forty-three ounces silver per ton, with a decomposed gangue; developed by a tunnel 280 feet in length and some other workings.

**Queen of the Gulch.**—W. H. Matthews & Co., Leadville, Colo., owners; claim 1500x150 feet; situated on Summit Hill, Eagle River Mining district; located in 1881; vein a contact, with a crevice from nine inches to three feet wide, containing galena and carbonates, with a decomposed gangue-matter; developed by a shaft twenty-five feet in depth.

**Queen of the Valley.**—G. A. Hohstadt, A. Walker, and P. J. Baldwin, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district, at Holy Cross; located in 1882; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz, which assays one ounce gold per ton; developed by an open cut twenty-two feet in length, with a fifteen-foot face.

**Rain-in-the-Face.**—T. J. Rinker, Jno Monroe, P. H. King, and Geo. T. Lyles, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on French Mountain, Holy Cross Mining district, three-fourths mile from Holy Cross City; located in 1881; vein a fissure, containing eighteen inches in width of gold-bearing quartz, which assays from two to four ounces gold per ton; developed by an open cut fifteen feet in length, with a ten-foot face.

**Raymond.**—150x1500 feet; situated on Battle Mountain, two and one-half miles from Red Cliff, Battle Mountain district; located in 1879, and in process of patent; owners M. J. Smith, Pat. Dempsey, Hugh Higgins, Samuel Jacobs, Chester Rowe, James Sprague, Geo. Daniels, James Marker, E. Steen, and Daniel Whelton, all Leadville, and Samuel Houston, St. Louis; ore body is a deposit of varying thickness, containing lead carbonates, which mill sixty per cent lead, from ten to twenty ounces silver, and some gold per ton, when sorted from the decomposed gangue; developments—one tunnel 120 feet long and two shafts fifty and twenty feet deep, respectively; output $2,500.

**Red Cloud.**—H. S. Benthers and J. H. Good, Red Cliff and Holy Cross City, owners; claim 1500 by 150 feet; situated on French Mountain, Holy Cross Mining district, three-fourths mile from Holy Cross City; located in 1881; vein a fissure, with a crevice five feet wide, containing gold-bearing quartz, which assays from $50 to $300 per ton; developed by an open cut twenty feet in length, with a fifteen-foot face.

**Redbird.**—G. A. Hohstadt, A. Walker, M. Fleck, and W. T. Roberts, all Holy Cross City, Colo., owners; claim 1500x150 feet; situated on the south slope of French Mountain, Holy Cross Mining district; located in 1880; vein a fissure, with a crevice six feet wide, containing quartz which carries gold, assaying one and one-half ounces gold per ton; developed by two open cuts eighteen and twenty feet in length, respectively.

**Rising Sun.**—W. H. Matthews & Co., Leadville, Colo., owners; claim 1500x150 feet; situated on Summit Hill, Eagle Mining district, one and one-fourth miles from Taylor City; located in 1880; vein a contact, with a crevice six feet wide, containing carbonates, which mill-runs twenty-five ounces silver and one-half ounce gold per ton, with a decomposed gangue; developed by a shaft seventy-five feet in depth and a drift seventy-five feet in length; output from two to six tons per day.

**Roberts.**—(See Newton Group.)

**Rock and Matchless.**—R. W. McQuilkin, O. E. Stone, and John Carroll, Red Cliff, Colo., and Wm. Bentley, Bonanza, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879; veins both contacts, with crevices from six to eight feet in thickness, containing an ore which assays ten per cent lead, and forty-two ounces silver per ton; developed by two shafts 136 and 100 feet in depth, respectively.

**Rocky Point.**—R. L. Rohm, Henry Laffer, both Red Cliff, and Nathaniel Sears, Central City, Colo., owners; claim 1500x150 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in June, 1879; vein a fissure, in a quartz formation, with a crevice four feet wide, containing gold and galena carrying silver scattered through the vein-matter, which assays from twenty-five to seventy-five ounces silver and one-half ounce gold per ton; developed by an incline twenty-five feet in length.

**Rose.**—(See Anglo-American Mining Company.)



**Salurian and Black Prince.**—Thomas, James, and Joseph Smitherum, Wm. B. Sherick, all Red Cliff, Colo., O. H. Harker and E. L. Campbell, both Leadville, Colo., owners; claims 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district, at Red Cliff; located in 1879; veins both contacts, with crevices from two to six feet in width, containing carbonates and chlorides, which mill-run thirty per cent lead and fifteen ounces silver per ton, when sorted from the gangue-matter; developed by two tunnels 60 and 300 feet in length, respectively, and drifts aggregating thirty feet.

**Searsport.**—(See Geo. H., Searsport, and Emma Sargent.)

**Shamrock and Australian.**—Jeremiah Collins, New York City, N. Y., and P. J. Haggerty, Leadville, Colo., owners; claims 1500x150 feet each; situated on the south slope of French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880, and patented in 1881 and 1882; veins both fissures, containing from five to ten inches of gold-bearing quartz, which mill-run one ounce gold per ton; developed by two shafts eighteen and twenty-two feet in depth and an open cut twenty-two feet long.

**Sherman.**—(See Silver Bullion Mining Company.)

**Silver Bullion Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, John E. Burson, Muncie, Ind.; vice-president, C. C. Cherey, Chicago, Ill.; treasurer and superintendent, A. R. Brown; secretary, James N. Templer—both Leadville, Colo.; office Rooms 17, 18, and 19 Howell Building, Leadville, Colo.; owns the Eagle Bird, Sherman, and Mountain Chief, 1500x150 feet each; situated on Battle Mountain, Battle Mountain Mining district; located in 1879; veins all contacts of varying thickness, containing carbonates carrying silver; developed by a tunnel 100 feet in length and an incline 200 feet in length.

**Silver Cliff and Roaring Eagle.**—J. Q. Thomas and T. H. Webster, both Red Cliff, Colo., Wm. Tenby, Ogden, Ia., and Wm. Addis, Emporia, Kas., owners; claims cover eight acres; situated on the west slope of Battle Mountain, Battle Mountain Mining district, three miles from Red Cliff; located in 1879; veins all fissures, in a quartzite formation from two to five feet in width, containing quartz carrying gold, with galena carrying silver, assaying sixty per cent lead, thirty-five ounces silver, and one ounce gold per ton; developed by two tunnels thirty feet in length each.

**Silver Edge Group.**—L. A. Knutson and others, Red Cliff, Colo., owners; group comprises the Silver Edge and four other lodes, 1500x150 feet each; situated on the west slope of Battle Mountain, Battle Mountain Mining district; located in 1879; claims all located on one contact, which varies in thickness from two to twelve feet, with a deposit from one to two feet, containing carbonates of lead, which mill-runs thirty-five per cent lead and from eight to seventy-five ounces silver per ton, when sorted from the gangue-matter; developed by two tunnels 111 and 126 feet in length, respectively, and drifts aggregating 500 feet.

**Silver Horn.**—John E. Anderson, Red Cliff, Colo., owner; claim 1500x150 feet; situated on the south-west slope of Horn-silver Mountain, Horn-silver Mining district, one mile from Red Cliff; located in 1879; vein a contact, with a crevice six feet wide, through which is scattered gold and silver bearing quartz, which assays sixteen ounces silver and two ounces gold per ton; developed by a tunnel 100 feet long and an incline fifty feet in length.

**Silver Wave.**—(See Eagle Bird Consolidation.)

**Solid Muldoon Group.**—W. M. Snyder, N. L. Eby, both Iowa., and A. R. Brown, Leadville, Colo., owners; group comprises the Solid Muldoon, Sutra P, Lida F, and Jim Keene lodes, 1500x150 feet; situated at Camp Fancy, Holy Cross Mining district, two miles from Holy Cross City; located in 1880; vein a fissure, with a crevice five feet wide, containing quartz carrying gold, which assays three ounces gold per ton; developed by four tunnels twenty-five feet in length each.

**Sophie.**—(See Middle Mountain Mining Company.)

**Spirit.**—Wm. Bond, Chas. George, Thos. Smitham, and T. H. Baker, Leadville and Red Cliff, Colo., owners; claim 1500x300 feet; situated on the west slope of Battle Mountain, Battle Mountain Mining district, near Red Cliff; located in 1879, and patented in 1882; vein a contact, containing from six inches to three feet of carbonates of lead, which mill-runs from thirty to fifty per cent lead and from ten to sixteen ounces silver per ton, when sorted from the gangue-matter; developed by a tunnel 200 feet in length and drifts aggregating 200 feet; output 300 tons, and weekly shipments thirty tons.

**Stockholm Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, H. A. Plimpton, Chicago, Ill.; vice-president, F. A. Malins, Aspen, Colo.; secretary and treasurer, D. Jackson, Chicago, Ill.; general manager, Emerson Gee, Leadville, Colo.; offices 164 Dearborn street, Chicago, Ill., and Holy Cross City, Colo.; owns the Stockholm, Christiana, and Newman lodes, 1500x150 feet each; situated on French Mountain, Holy Cross Mining district, at Holy Cross City; located in 1880, and in process of patent; veins all fissures, with crevices from four to ten feet wide, and pay streaks from four inches to two feet, containing gold-bearing quartz, which mill-run one and three-fourths ounces gold per ton; developed by three tunnels thirty feet in length each; output fifty tons.

**Sulphide Group.**—Wm. Greiner and J. J. DaLee, both Red Cliff, Colo., owners; group comprises the Grand Central, Greiner, Ruby, Osage, O. K., Sulphide, Surprise, Tip-top, and Julu Chief lodes, 1500x150 feet each; situated on Horn-silver Mountain, Horn-silver Mining district, at Red Cliff; located in 1879; veins all contacts, from eight inches to two feet wide, containing carbonates with some brittle and horn silver, which mill-run as high as 1,500 ounces silver per ton, when sorted from the gangue; developed by an incline 160 feet in length and nine shafts twenty feet in depth each.

**Taylor Hill Milling and Mining Company.**—(Unincorporated); composed of H. R. McClelland and C. Reiter, both Taylor City, Colo.; owns and operates a grinding and stamp mill, situated on Taylor Hill, containing two Morey & Sperry Plates, Howland Riffles and Pulverizer, and a Foster Crusher, motive-power for the same being supplied by a forty-horse-power engine; and it has a capacity for treating twenty-four tons in twenty-four hours.

**Taylor Hill Placer.**—Seventy-six acres; situated near Taylor Hill, Eagle district; located in March, 1882; owners Max Boehmer and John M. Maxwell, both Leadville, H. R. McClelland, W. R. Bair, Jay Greene, J. A. Jackson, and H. R. Moulton, all Taylor Hill; developments—two shafts twenty and fifteen feet deep, respectively, with some improvements.

**Tellurium Mining Company (The).**—Incorporated under the laws of Colorado, in the spring of 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, R. H. Drennon, Kansas City, Mo.; vice-president, S. Ayres, Jr.; secretary, C. F. Lee; treasurer, James T. McHugh—all Leadville; office 311 Harrison Avenue, Leadville; owns fifteen claims, 150x1500 feet each, viz.: Attica, Herculaneum, Ayres, Hill, Wright, Streeter, Archibald, Brower, Beecher, Newhouse, Parker, Voght, Edwards, Mayberry, McHugh, and ———; situated on the south-west slope of the Holy Cross spur of the Rocky Mountain range, Tellurium district; located in 1881; veins all fissures, containing iron-stained quartz, which assay twenty ounces silver and $25 gold per ton; developed by fifteen shafts ranging from fifteen to ninety-five feet in depth each.



**Temple.**—(See Pilot Temple.)

**Todd.**—(See Catherine Todd.)

**Tones Paugh Group.**—Melvin Edwards, Denver, Colo., and W. D. Arnett, Morrison, Colo., owners; group comprises seven claims, 1500x150 feet each; situated on the north slope of Horn-silver Mountain, Horn-silver Mining district; located in July, 1879, and patented in January, 1882; veins all contacts, with crevices from three to twelve feet in width, containing carbonates of lead with some horn-silver, which assay twenty-five per cent lead and 300 ounces silver per ton, with a decomposed gangue; developed by an incline eighty-five feet in length.

**United States and Mammon.**—Stewart Miller and Joseph Swan, Red Cliff, Colo., owners; claims 1500x150 feet each; situated at the head of Roche-Moutonnée Creek, and on Holy Cross Mountain, in Holy Cross Mining district, eighteen miles from Red Cliff; located in 1881; veins both contacts, four and twelve feet wide, respectively, without any defined pay streaks, the crevice-matter containing quartz, through which is scattered galena, assaying fifty-six ounces silver per ton; United States developed by an eighteen-foot open cut with a ten-foot face, and the Mammon by a fifteen-foot shaft.

**Victoria**—E. F. Campbell and G. W. Tabor, both Red Cliff, Colo., owners; claim 1500x150 feet; situated on the south slope of Battle Mountain, Battle Mountain Mining district, one-half mile from Red Cliff; located in May, 1881; vein a contact, without any defined deposit, but the quartz contact is seamed with carbonates of lead and galena, assaying six ounces silver and seven-tenths ounce gold per ton; developed by a tunnel twenty feet in length.

**Wild Cat and Tiger.**—Philip Schearer, J. N. Clifford, and others, Taylor City, owners; claims 1500x150 feet each; situated on the west slope of Taylor Hill, Eagle River Mining district; located in 1879, and in process of patent; veins both contacts, with crevices from two to five feet wide, containing carbonates carrying gold and silver, which mill-run $20 per ton, with a decomposed gangue; developed by a shaft 150 feet in depth and drifts aggregating fifty feet.

**Wolf Tone.**—Dennis Carter, Holy Cross City, and Michael Lemhan, Leadville, Colo., owners; claim 1500x150 feet; situated in Missouri Camp, Holy Cross Mining district, ten miles from Holy Cross City; located in 1881; vein a fissure, with a crevice eighteen inches wide, containing galena in a quartz gangue; developed by an open cut twenty feet in length, with a fifteen-foot face

# Fremont County.

This County is bounded on the north by Park and El Paso, on the east by El Paso and Pueblo, on the south by Custer, and on the west by Chaffee and Saguache Counties. It has an estimated population of 7,500, with Cañon City as the county seat and chief center, and covers an area of 1,268 square miles, the greater portion of which is devoted to agriculture and stock-raising—only the smaller part to the pursuit of mining. The industry last named was added to its resources during 1881, when its first bullion returns were reported in the table for that year; the product, $14,535.50, having been almost wholly obtained from two mines—the Cotopaxi, in the district of that name, and the Gem, in Grape Creek Cañon. In the latter there is much nickel associated with the silver, the only known instance of this metal occurring in quantity in Colorado. During the past two years several discoveries of veins carrying gold, silver, copper, nickel, etc., have been made, from which it may confidently be anticipated that the yield of $19,960 in 1882 will be largely increased during the present year.

Fremont County is, however, chiefly noted for its superior coal mines, from which the largest portion of southern Colorado has been supplied for a number of years. It is a superior lignite, and, it is said, denser, more durable, and giving out greater heat than those found in the northern part of the State, and is an excellent fuel for household use. Mixed with those found at Trinidad it makes a superior coke, and is used for the manufacture of illuminating gas, and for smelting purposes. The product for 1881 was about 150,000 tons, while in 1882 it aggregated from all sources 160,000.

**Bee-hive Milling and Mining Company (The).**—Incorporated under the laws of Colorado; president and general manager, E. H. Saltiel; secretary, Morris S. Wise; office Cotopaxi, Colo., and 52 Exchange Place, New York; owns the Bee-hive lode; situated opposite Cotopaxi, thirty-two miles west of Cañon City, Cotopaxi district; containing a magnetic iron ore, which mill-runs fifty-nine per cent metallic iron and seven per cent silica; developed by a tunnel 600 feet in length, with some drifting; worked by a plant of Ingersoll Air-drills and Compressors.

**Black Bull and White Bull Lodes.**—Chas. Schell, Cañon City, Colo., owner; claims 1500x300 feet each; situated on Badger Creek, Badger Creek Mining district, six miles from Salida; located in July, 1881; vein has defined walls, with a crevice four feet wide, and a pay streak two and one-half feet, containing iron and copper pyrites carrying gold and silver, milling $150 per ton, when sorted from the gangue-rock; developed by a number of ten-foot shafts.



**Canon City, Iron, Paint, and Cement Company (The).**—Incorporated under the laws of Colorado; president, F. P. Blake; secretary and treasurer, F. H. Skeele; office Cañon City; owns 700 acres of land, containing ledges varying in width of red oxide of iron and hydraulic cement, and a works situated at Cañon City, containing crushing and grinding machinery for converting their material into paint and cement; capacity thirty barrels of cement per day.

**Captain (The).**—George T. Pickett, Wellsville, owner; claim 1500x300 feet; situated six miles from Salida; located in 1881; vein has defined walls, with pay streak five feet wide, containing magnetic iron and some copper, assaying one fourth of an ounce gold and thirty-three ounces silver per ton, with a quartz gangue; developed by a shaft sixty feet in depth.

**Coal Creek Mines.**—Situated on Coal Creek, and owned by the Colorado Coal and Iron Company (see Gunnison County); containing a stratum of lignitic coal of superior quality for household use being both dense and durable, although it does not alone make a good coke, yet by an admixture with certain portions of a variety obtained at El Moro, a very fine article is obtained; the developments are extensive, and the property has had a larger output than any other in the County, that for 1882 being over 91,000 tons of coal.

**Cotopaxi.**—(See Enterprising and Cotopaxi.)

**Creamery and Hap-hazard Lodes.**—A. D. Cooper, Charles Rudd, A. S. Rudd, and Anson Rudd, all Cañon City, Colo., owners; claims 1500x300 feet each; situated in Grape Creek Mining district, four miles from Cañon City; located in 1882; vein has defined walls, with a crevice three and one-half feet wide, containing gold and silver-bearing quartz, assaying $8 per ton; developed by a shaft eighteen feet in depth and an open cut.

**Enterprising and Cotopaxi Lodes.**—E. H. Saltiel, Cotopaxi, Colo., agent; claims 1500x300 feet each; situated in the Cotopaxi district; thirty-two miles west of Cañon City, and patented; veins have defined walls, with crevices forty feet wide, and pay streaks about fifteen feet, containing zinc blende, free from lead, which mill-run, when sorted from the gangue-rock, fifty-eight per cent metallic zinc, from four to six per cent copper, and ten ounces silver per ton, the copper streak being six feet in width; under-ground workings aggregate 600 feet.

**Gem.**—1500x300 feet; situated in Grape Creek Cañon, Grape Creek Mining district; the developments consisting of shafts, cross-cuts, and drifts, showing a body of nickel ore associated with silver; this is probably the most important property in the County, the greatest portion of the bullion output for the past two years having come from this mine.

**Golden Eagle.**—A. Sartor, S. M. Johnson, and H. A. Silsby, all Cañon City, Colo., owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; located in 1882; vein a contact, with a crevice three feet wide, containing carbonates carrying cold and silver, assaying $7.75 in gold and $65 in silver per ton, with a decomposed gangue; developed by a tunnel ten feet in length.

**Golden Slipper.**—Mrs. M. A. Silsby and H. A. Silsby, both Cañon City, Colo., owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; located in March, 1881; vein has defined walls, with a crevice three feet wide, containing quartz carrying gold and silver; developed by a shaft ten feet in depth.

**Grape Creek Mine.**—An iron-producing property; situated on Grape Creek, between Cañon City and Silver Cliff; owned by the Colorado Coal and Iron Company (see Gunnison County); containing a large deposit of magnetic iron ore; the developments being quite considerable; and the output for 1882, 801 tons.

**Green Jacket.**—G. R. Cassidy, L. A. Clapp, F. H. Mayer, and Geo. R. Shaffer, owners; claim 1500x300 feet; situated in the Grape Creek Mining district, five miles from Cañon City; located in 1871; vein has defined walls, with a pay streak two feet wide, containing copper and iron carrying gold, assaying $600 per ton, with a quartz gangue; developed by a shaft thirty feet in depth and a tunnel seventy-five feet in length.

**Green Mountain.**—1500x300 feet; situated on the divide between Pine and Copper Gulches, about five miles west of Grape Creek; located in the fall of 1882; containing a vein of copper ore varying in width from six to twelve feet, some of which when shipped to market yielded by assay test twenty per cent copper and about $10 per ton in gold and silver, this being probably a fair average of the whole mass.

**Gypsy Queen.**—S. T. Todd and H. Burson, both Pueblo, Colo., and others, owners; W. A. Cassel, Cañon City, Colo., manager; claim 1500x300 feet; situated in Horseshoe Camp, Grape Creek Mining district, seven miles from Cañon City; located in September, 1880; vein has defined walls, with a crevice eight feet wide, and a pay streak five feet, containing quartz carrying gold and silver, milling from $40 to $70 per ton: developed by a tunnel fifty feet in length.

**Hap-hazard.**—(See Creamery and Hap-hazard.)

**Horseshoe.**—W. E. Embry and W. F. Reilly, both Cañon City, Colo., owners; claim 1500x300 feet; situated on Grape Creek, Grape Creek Mining district, eight miles from Cañon City; located June 6, 1882; vein has defined walls, with a crevice fourteen feet wide, containing iron and copper carrying gold and silver, assaying from $2 to $900 per ton, with a quartz gangue-matter; developed by a shaft 125 feet in depth.

**Lady Martha.**—A. Sartor and S. M. Johnson, both Cañon City, Colo., owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district; located in 1882; vein has defined walls, with a crevice five feet wide and a pay streak three feet, containing carbonates carrying gold and silver, with a decomposed gangue; developed by a shaft twenty feet in depth.

**Lady Washington.**—Henry A. Silsby, Cañon City, Colo., owner; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; located in 1882; vein has defined walls, with a crevice three and one-half feet wide, containing quartz carrying gold and silver; developed by a tunnel twenty-three feet in length.

**Land, Investment, Coal and Oil Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president, D. G. Peabody; vice-president, W. B. McGee; secretary, E. B. Alling; treasurer, Geo. O. Baldwin; office Cañon City, Colo.; organized for the purpose of developing coal and oil lands, and is at present prospecting about six miles from Cañon City, with a complete plant and outfit of machinery.

**Lookout.**—1300x800 feet; situated in Grape Creek Cañon, Grape Creek district; located in 1882; the developments consist of about 200 feet of shafts and levels, showing a very fair material.



**Mellissa.**—J. E. Brown and S. R. Silsby, both Cañon City, Colo., owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; located in 1881; vein has defined walls, with a crevice three feet wide, containing argentiferous galena in a quartz gangue; developed by a shaft forty feet in depth.

**Northern New Strike.**—M. J. Coleman and H. A. Silsby, both Cañon City, Colo., owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; located in 1882; vein has defined walls, with a crevice three feet wide, containing quartz carrying gold and silver; developed by a shaft ten feet in depth.

**Oak Creek No. 1.**—A coal property, situated on Coal Creek, and owned by the Colorado Coal and Iron Company (see Gunnison County); containing a stratum of lignitic coal, similar in quality to that in the Coal Creek mines; the developments being quite extensive, and the output for 1882 was 5,455 tons.

**Oak Creek No. 2.**—A coal property, situated on Oak Creek, and owned by the Colorado Coal and Iron Company (see Gunnison County); containing a stratum of lignitic coal, similar in quality to that of the Coal Creek mines; the developments being quite extensive, and the output for 1882 was 44,977 tons.

**Queen Bee.**—S. T. Ferrier, Robt. S. Lewis, and F. H. Skeele, all Cañon City, Colo., owners; claim 1500x300 feet; situated in Grape Creek Mining district, five miles from Cañon City; vein has defined walls, with a crevice six feet wide, containing iron and copper carrying silver, which assays $12 per ton; developed by two tunnels fifty feet in length each.

**Rocky Mountain Mine Developing Company**—Incorporated under the laws of Colorado in 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non assessable; president, W. K. Johnson; vice-president, John A. Grier; secretary, Orson G. Stanley; treasurer and general manager, Wm. E. Johnson; office Cañon City, Colo.; owns the Green Mountain lode, 1500x300 feet; situated at Goat Park, twelve miles from Cañon City; located in 1872; containing three fissure veins from six inches to two feet in width; ore—copper carrying silver and gold, which mill-runs fifteen per cent copper, and from $1 to $12 in gold and silver, when sorted from the gangue-rock; developed by three shafts from 45 to 255 feet in depth and levels aggregating 210 feet worked by a Steam Hoister with thirty-tons capacity in twelve hours; and New Era and Wide West lodes, each 1500x300 feet; situated in Red Gulch, Red Gulch Mining district, forty-five miles from Cañon City; located in 1880; vein has defined walls, with a crevice two feet wide, containing copper and silver-bearing quartz, assaying twenty per cent copper and from fifteen to thirty ounces silver per ton; developed by a shaft fifty-five feet in depth.

**Rough and Ready.**—J. E. Brown and S. R. Silsby, both Cañon City, Colo., owners; H. A. Silsby, manager; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City, Colo.; located in 1882; vein has defined walls, with a crevice five feet wide, containing argentiferous galena in a quartz gangue-matter; developed by a shaft twenty feet in depth.

**Royal Gorge Smelting Company (The).**—Incorporated under the laws of Colorado in 1883; president, A. R. Gumaer; vice-president, W. R. Harp; secretary and treasurer, J. W. Taylor; offices Cañon City, Colo.; owns a smelting-works, situated at Cañon City, Colo.; main building 105x100

feet, containing two Furnaces, one Baker Blower, one Root Blower, one Blake Crusher, one Forester Crusher, two Howell & White Roasting Cylinders, twenty-four feet in length, three Pumps, Sample Grinders, Double-assay Furnace 9x15 feet; motive power for the same being supplied by a seventy-five horse-power engine and a forty-eight-inch Leffel Turbine Water-wheel with sixteen-foot head, or equivalent to ninety-three-horse-power, besides all the latest and most improved machinery for the treatment of ores, and has a capacity to treat seventy-five tons in twenty-four hours.

**Silver Star.**—A. Sartor and H. A. Silsby, both Cañon City, owners; claim 1500x300 feet; situated in Green Gulch, Grape Creek Mining district, four miles from Cañon City; vein has defined walls, with a crevice five feet wide, containing quartz carrying gold and silver; developed by a shaft thirty feet in depth.

**Slip-up.**—Owned by a corporation, of which George Griffin, Cañon City, Colo., is secretary, and Chas. Apple, Cañon City, Colo., is treasurer; office Cañon City; claim 1500x300 feet; situated eighteen miles south-west of Cañon City; located in 1875, and patented; vein has defined walls, with a pay streak four feet wide, containing a silver-bearing ore, assaying 100 ounces silver per ton; developed by a shaft sixty-six feet in depth.

**Snow-flake.**—S. Steinbeck, E. C. Flemming, and W. G. Ready, all Cañon City, Colo., owners; claim 1500x300 feet; situated three miles west of Cañon City; located in 1883; vein has defined walls, with a crevice twelve feet wide, containing quartz carrying gold and silver, assaying $2.50 in gold and $3,00 in silver per ton; developed by tunnel ten feet in length.

**Washington.**—(See Lady Washington.)

**White Bull.**—(See Black Bull and White Bull.)

JAMES BURRELL,

United States Commissioner,

*NOTARY PUBLIC AND CONVEYANCER.*

Real Estate, Collections, Mining,

AND BUSINESS BEFORE THE LAND OFFICE A SPECIALTY.

Central City, - Colorado.

# Gilpin County.

This County is situated on the east side of the Continental Divide, and is bounded on the north by Boulder, on the east by Jefferson, and on the south by Clear Creek County. It has an estimated population of 9,500, with Central City as its county seat and chief center, and covers an area of 158 square miles—the smallest County in the State, but its record of production is the greatest, with the single exception of Lake.

Gilpin is the oldest County in the State; the history of Colorado having its beginning here, and all the other counties having obtained from it their most instructive lessons in mining and milling. Its mines have been under development for over twenty-three years, and the gold-producing ones are clustered in groups within a space of less than four miles diameter. In the period named the product aggregated $41,000,000, of which $37,500,000 was gold, and $3,500,000 silver (the latter having been almost wholly obtained subsequent to 1878), and the aggregate amount constituting more than one-fourth of the bullion output of the State and nearly two-thirds of all the gold. To detail, the yield for 1872 was $1,389,289, for 1873 $1,530,009, for 1874 $1,631,863, for 1875 $1,763,985, for 1876 $2,240,000, for 1877 $2,203,037, for 1878 $2,257,000, for 1879 $2,431,291, for 1880 $2,680,090, for 1881 about $2,500,000, or a considerable decline from that of 1880; and the same remark holds good in comparing the output of 1882 with that of 1881, a condition of things brought about by various causes which are readily explainable. The decline was due to the suspension of work on several of the more extensively operated properties, rather than the lack of paying ores; and in many instances the suspension was caused by the necessity of providing heavier machinery for raising ore and water from the great depths attained, while on others development work only was being done, pending negotiations for their purchase. The majority of these mines have, however, resumed operations, from which it may be expected that the yield for 1883 will be a considerable advance on that of 1882.

In Gilpin County the formation is granitic and the veins true fissures, varying in width from one to twelve feet, and averaging about three feet. The ores contained therein are in some instances free-milling, while in others it is refractory, and best treated by the smelting process; but in quantity and quality it remains near the old standard to the greatest depths thus far attained. Indeed, there seems to have been some increase on the whole in both, probably sufficient to compensate the additional expense of mining at great depth, and at all events there are no present indications that they will deteriorate within the limits of practical operation. The stamp-rock yields, as indicated by numerous assay tests, from $15 to $20 in gold and five ounces silver per ton; although the amount extracted by the ordinary stamp-mill is only about sixty per cent of the gold and seven per cent of the silver contained therein, or an average probably of $10 per ton, the silver saved being only that which is in alloy with the gold, and it varies perceptibly in the ores of different mines.

The sulphuret or smelting product, comprising the sulphides of iron, zinc, copper, lead, etc., is ordinarily separated from the stamping-ore by hand-sorting, and then sold for smelting; and the value of this, as indicated by twelve years' continuous operation, varies from $75 to $100 (coin) per ton, or delivered to the smelters the producer receives from $55 to $75 per ton.

It may be stated that outside of the cluster of gold-bearing fissures already mentioned, and surrounding it on all sides, there is a belt of highly productive veins, similar to those referred to in character of gangue-matter and mineral, with the exception that the precious metal is almost exclusively silver. Some of these lodes were located as early as 1864, but were very little worked till 1878, there being no available market for the ores, in consequence of which they were generally abandoned; but since the latter date many of them have been relocated and worked with very gratifying results. It may reasonably be expected that with the aid of these silver mines, and the increasing richness of the gold lodes, the County's output will constantly increase for many years to come.

The Gold-dirt District was practically deserted from 1865 until a little over two years ago, when a general revival took place, since which time a number of properties have been profitably operated.

For several years the placer mines have added but little to the bullion returns of the County. With the exception of a few companies engaged in the gravel-beds between Black Hawk and the Junction several miles below, the diggings are in the hands of Chinamen, whose habits of economy enable them to make a living from very lean ground.

**Ada.**—L. and S. Sternberger, 503 Market street, Philadelphia, Pa., owners; claim 1500x150 feet; situated at Camp Clifford, Eureka Mining district, two miles from Central City; located October 5, 1881; vein a fissure, with a crevice four feet wide, but no defined pay streak, the entire vein-matter being seamed with galena, gray copper, and sulphurets in a quartz gangue-matter; developed by a shaft 155 feet in depth and some other workings.

**Aduddell.**—Dr. R. G. Aduddell, Central City, Colo., owner; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, two and one-half miles from Central City; vein a fissure, with a crevice from two to four feet in width, containing gold-bearing quartz and iron and copper pyrites carrying gold and galena carrying silver, the stamp-rock milling six ounces gold per cord, and the smelting-ore netting from $18 to $40 per ton; developed by one main shaft 150 feet in depth, with some other workings.

**Agra.**—A. N. Rogers, Geo. H. Gray, and the Legal Tender Gold and Silver Mining Company, owners; claim 1300x150 feet; situated at the head of Davenport Gulch, Russell Mining district, two and one-half miles from Central City; located in 1879, and in process of patent; vein a fissure, with a crevice three feet in width, and a pay streak eighteen inches, containing iron and copper pyrites and gold-bearing quartz, the stamp-rock milling from two to seven ounces gold per cord, when sorted; developed by three shafts, fifteen, thirty, and fifty-five feet in depth, respectively.

**Air Line.**—Situated at the head of Russell Gulch, about two miles from Central City; vein a fissure varying in width, on which are sunk a number of shafts, none, however, of much depth, showing gold-bearing quartz (stamp-rock) near the surface, and the same mixed with iron and copper pyrites lower down.

**Allbright.**—Shey, Rafield & Co., Central City, Colo., owners; claim 1500x150 feet; situated on Winnebago Hill, Eureka Mining district, one-fourth mile from Central City; located in 1859; vein a fissure, with a crevice three feet wide, containing decomposed quartz carrying gold, which mill-runs four ounces gold per cord, when sorted; developed by a shaft forty feet in depth.



**Alpha.**—Patrick Meagher, Central City, Colo., owner; claim 1500x150 feet; situated on Missouri Hill, Russell Mining district, one-half mile from Central City; located in 1862; vein a fissure, with a crevice eighteen inches wide, containing iron and copper pyrites and gold-bearing quartz, the stamp-rock milling, when sorted, from two and one-half to three ounces gold per cord; developed by two shafts 35 and 125 feet in depth, respectively, with some drifting; output $5,000.

**Americus Group.**—Comprising the Americus, Ground-hog, Blythe, Columbus, Emma, and Fisk lodes; John Reilley and others, Central City, Colo., owners; claims cover 6500x600 feet of surface ground, in parallel lode claims; situated on Bobtail Hill, Gregory Mining district, at Central City; Fisk and Americus patented; veins all fissures, with crevices from three to twelve feet in width, containing iron and copper pyrites, yielding, when sorted, from $50 to $100 per ton, and gold-bearing quartz (stamp-rock) milling from four to eight ounces gold per cord; Americus developed by a shaft 300 feet in depth, Fisk by a shaft 300 feet, Ground-hog by a shaft 130 feet, Blythe by a shaft fifty feet, Columbus by a shaft 200 feet, and Emma by a shaft fifteen feet, with other workings.

**Anchor Milling and Mining Company.**—Incorporated under the laws of Missouri; secretary and treasurer, J. Beggs, St. Louis, Mo.; general manager, A. M. Stedman, Nevadaville, Colo.; offices St. Louis, Mo., and Nevadaville, Colo.; owns the Ancient and Helmer-Martin lodes, 3700x150 feet, 3000x150 feet of which is patented; situated in Willis Gulch, Russell Mining district; veins all fissures, with crevices from two and one-half to three feet in width, containing iron and copper pyrites carrying gold (a smelting-ore), which mill-run, when sorted, from $25 to $60 per ton; Ancient developed by a shaft fifty feet in depth, and Helmer-Martin by a shaft 160 feet in depth, the latter having produced very largely, but the amount is difficult to ascertain; and a stamp-mill, situated in Willis Gulch, near the mines; main building 100x75 feet, containing ten Stamps, motive power for the same being supplied by a fifty-horse-power engine; capacity to treat ten tons of ore in twenty-four hours.

**Ancient.**—(See Anchor Milling and Mining Company.)

**Anglo-Celt.**—John E. Morris, Central City, Colo., and William Spence, Brooklyn, N. Y., owners; claim 1500x150 feet; situated on Clear Creek, Fairfield Mining district, two miles from Central City; located in 1877, and patented in 1883; vein a fissure from five to six feet wide, pay streak two and one-half feet, containing sulphurets and gray copper carrying silver, milling from 100 to 1,000 ounces silver per ton, when sorted from the gangue-rock; developed by a shaft 118 feet in depth and other workings.

**Annie.**—James Strike, Edward Truscott, and W. Hockedy, all Russell Gulch, owners; claim 1500x150 feet; situated in the Missouri Mining district, one and one-half miles from Central City; located in 1880; vein a fissure from two to eight feet wide, containing iron and copper pyrites and gold-bearing quartz, the stamp-rock milling from four to five ounces gold per cord, and the smelting ore from $40 to $60 net per ton, when sorted; developed by two shafts thirty and forty-five feet in depth.

**Arctic Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in May, 1880; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, E. W. Ogleboy, Wheeling, W. Va.; vice-president, J. T. Bemel, Denver, Colo.; secretary and treasurer, R. G. Barr, Wheeling, W. Va.; general manager, J. S. Bates, Central City, Colo.; offices Wheeling, W. Va., and Central City, Colo.; owns the Arctic

lode, 1400x50 feet; situated on Bobtail Hill, Gregory Mining district; located in 1859, and patented in 1872; vein a fissure, with a crevice from two and one-half to five feet wide, and a pay streak ten inches on the hanging-wall, containing gold-bearing quartz and iron pyrites, the smelting-ore milling from $27 to $157 net per ton, when sorted; developed by a shaft 300 feet deep, with two levels, running therefrom at a depth of 200 feet, 25 and 100 feet long, and two levels, at a depth of 300 feet, twenty-six and thirty-four feet long, with some stoping; improvements—one thirty-four-horse-power engine, with the necessary buildings.

**Arizona Group.**—Consisting of Arizona, No Name, Hawkeye, Simon Kenton, and Venice. (See Clear Creek County.)

**Arlington.**—Sidney W. Tyler and George H. Gray, both Central City, Colo., owners; claim 1100x150 feet; situated on Eureka Hill, Eureka Mining district; located in 1875, and patented in 1880; vein a fissure, with a crevice three feet in width, and a pay streak eighteen inches, containing iron and copper pyrites and gold-bearing quartz, the stamp-rock milling five ounces gold per cord, when sorted; developed by a shaft ninety feet in depth and a level forty feet in length; output $1,600.

**Atlantic.**—Patrick Meagher, W. H. Flagg, and John Goggin, all Central City, Colo., owners; claim 1500x150 feet; situated near the Hard Money lode, Mountain House Mining district, two and one-half miles from Central City; located in 1878, and patented in 1881; vein a fissure, with a crevice two feet wide, containing argentiferous galena, which mill-runs sixty ounces silver per ton, with a quartz gangue; developed by two shafts 65 and 100 feet in depth and some drifting; output $2,000.

**Atlantic and Brighton.**—John E. Morris, Central City, and William Spence, Brooklyn, N. Y., owners; claims 1500x150 feet each; situated on Mammoth Hill, Gregory Mining district, at Central City; vein a fissure of varying width, containing iron and copper pyrites and gold-bearing quartz, the stamp-rock milling, when sorted, from three to ten ounces gold per cord, and the smelting-ore yielding $85 per ton; Atlantic developed by four shafts, forty, fifty-seven, eighty, and eighty-seven feet in depth; and Brighton by three shafts, fifty-seven, eighty, and ninety feet in depth, with 200 feet of drifting.

**Aurora Gold Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Charles W. Price, Central City, Colo.; vice-president and treasurer, John A. Wilson, St. Louis, Mo.; secretary, Samuel Y. Smith, Denver, Colo.; general manager, Charles W. Price, Central City, Colo.; offices 720 Pine street, St. Louis, Mo., and Central City, Colo.; owns the following lodes: Charter Oak, North Eclipse, Ezra White, Gem, Augusta May, Effie, and one other claim, all 1500x150 feet each, except the Augusta May, 1200x150 feet, and Gem, 1000x150 feet; situated on Quartz Hill, Russell Mining district, one and one-half miles from Central City; located in 1860; veins all fissures, with crevices from two to four feet wide, containing iron and copper pyrites and gold-bearing quartz, the latter milling, when sorted, from four to eight ounces gold per cord, and the former $20 per ton; Charter Oak developed by a seventy-five-foot shaft, Ezra White by a thirty-three-foot shaft, Effie by a twenty-five-foot shaft, and North Eclipse by a seventy-eight-foot shaft, with some other workings.

**Babe of the Woods.**—L. Schaffnit and James E. Kane, both Central City, owners; claim 1500x150 feet; situated on Dorey Hill, two miles from Central City, Mountain House Mining district; located in 1876; vein a fissure from five to seven feet wide, containing galena and carbonates, milling fifty-five per cent lead and from 30 to 500 ounces silver per ton, when sorted from the decomposed gangue; developed by one shaft 130 feet in depth and one seventy-foot drift; output $1,000.



**Bachus Group.**—Seven claims 1500x150 feet each; situated on Bobtail Hill, a little east of the Bobtail mine, on which the developments consist of a shaft on each claim from 10 to 100 feet in depth, showing fissure veins of varying width, with pay streaks from one to four feet, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly.

**Baltimore.**—William Scholl and Otto Sauer, both Central City, Colo., owners; claim 1500x150 feet; situated in Main Hamlin Gulch, one and one-half miles from Central City; vein a fissure, with a crevice from two to four feet wide, containing galena and gray copper, assaying sixty-one ounces silver per ton, with a quartz gangue; developments consisting of assessment work.

**Barker.**—Elias Goldman and William Sheeley, both Central City, Colo., owners; claim 1500x110 feet; situated on Quartz Hill, Nevada Mining district, one mile from Central City; located in 1860, and patented in May, 1880; vein a fissure, with a crevice four feet wide, and a pay streak twenty inches, containing quartz and iron pyrites, both carrying gold, the stamping-material milling from five and one-half to seven and one-half ounces gold per cord, and the smelting ore yielding $100 per ton, when sorted; eeveloped by two shafts 80 and 230 feet in depth, respectively, and 100 feet of drifting.

**Becky Sharp.**—(An extension of the Pewabic); Thomas Manning and others, New York, N. Y., owners; Charles L. Harker, Central City, manager; claim 1500x150 feet; situated in Graham's Gulch, Russell Mining district, two miles from Central City, and patented in 1880; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from two to fourteen ounces gold per cord, and the smelting-ore yielding from $22 to $160 per ton, when sorted; developments—one main shaft 106 feet in depth and 600 feet of drifting.

**Bedford County.**—1000x50 feet; situated on Bobtail Hill, at Black Hawk, and located in 1866; vein a fissure about twenty inches wide, but widening with depth, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from five to fifteen ounces gold per cord, and the smelting-ore from $20 to $40 per ton, but improving with depth; developments—one main shaft 200 feet deep, with some drifting and other shafts.

**Belcher.**—Bradford H. Locke, Central City, Colo., owner; claim 510x50 feet; situated on Quartz Hill, Nevada Mining district, one-half mile from Central City; located in 1872, and patented in 1873; vein a fissure, with a crevice from two to three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from two to six ounces gold per cord, when sorted; developed by two shafts thirty feet deep each and 100 feet of drifts.

**Belden & Tennel Mining Company (The).**—Incorporated under the laws of Colorado, in 1875; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, D. D. Belden, Denver, Colo.; secretary, Alonzo Furnald; treasurer, Fred. Kruse—both Central City, Colo.; office Central City, Colo.; owns the Belden Tunnel site, 3000x6 feet; situated in Chase Gulch, Gregory Mining district, at Central City; located in 1875, and patented in 1876; on which a tunnel has been driven 600 feet in length, opening up six veins, on which the following claims have been located, viz.: Geo. W. Ellery, Alonzo Furnald, Black Quartz, Herbert Spencer, R. P.

Ramsey, Louis Napoleon, and Araphoe, 1500x150 feet each; veins all fissures, from three to seven feet in width, containing gold-bearing quartz and iron pyrites, the stamp-rock millnig, when sorted, $12 per ton; the Herbert Spencer developed by a drift from the tunnel 400 feet in length, the Geo. W. Ellery by a drift 350 feet, Alonzo Furnald by a drift 100 feet, Black Quartz by a drift 250 feet; output $40,000 prior to 1879.

**Belden-Tennal.**—(See First Centennial and Belden-Tennal.)

**Belfast and Shamrock.**—John E. Morris, Central City, and William Spence, Brooklyn, N. Y., owners; claims 1500x300 feet; situated on Mammoth Hill, Gregory Mining district, at Central City; located in 1863; vein a fissure, three and one-half feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to eighteen ounces gold per cord, and the smelting-ore yielding $114 net per ton; Belfast developed by a shaft eighty feet in depth, and Shamrock by a shaft seventy-four feet in depth.

**Big Chief.**—Wm. H. Cheatley, Central City, Colo., owner; claim 1500x150 feet; situated on Pewabic Mountain, Virginia Mining district, three miles from Central City; located in 1880; vein a fissure, with a crevice three feet wide, containing pockets of iron pyrites carrying gold, and galena carrying silver, which mill-runs, when sorted, nine-tenths ounce gold and eleven and one-half ounces silver per ton; developed by a shaft thirty feet in depth.

**Bismarck Tunnel.**—John Taller, John Gruber, and Geo. Egger, all Central City, Colo., and others, owners; site 3000x6 feet; situated at Black Hawk, Gregory Mining district; located in 1875; on which a tunnel is driven 350 feet in length, opening up a number of fissure veins of varying width containing gold-bearing quartz, milling, when sorted, by stamping process, about two ounces gold per cord, and iron and copper pyrites also carrying gold.

**Block.**—E. A. Lynn and others, Central City, Colo., owners; claim 1500x150 feet; situated in the Quartz Valley Mining district, two miles from Central City; located in 1882; vein a fissure, with a crevice four feet in width, and a pay streak twenty inches, containing argentiferous galena, which assays 200 ounces silver per ton; developed by a shaft twenty-four feet in depth.

**Bluebird.**—G. T. Howson and John E. Morris, both Central City, owners; claim 1500x150 feet; located in 1882, and situated on Nagle Hill, Quartz Valley Mining district; vein a fissure, with a crevice four feet wide containing galena, assaying from ten to sixty ounces silver per ton, in a quartz gangue; developed by a shaft forty feet in depth.

**Bobtail**—(See Consolidated Bobtail Company.)

**Bonanza and Union Tunnel and Mining Company (The).**—Incorporated under the laws of New York in 1881; capital stock $2,000,000, full paid, and non-assessable; president, George H. Danforth; vice-president, Frank Gulager; secretary, J. M. McIntosh—all New York City; treasurer, Theo. H. Becker, Central City, Colo.; offices 120 Broadway, New York City, and Central City, Colo.; owns the Bonanza and Union tunnel sites, on which tunnels are being driven for the development of a group of claims also owned by the Company, containing gold-bearing veins; situated between Gregory Gulch and North Clear Creek, Gregory district, near Central City; the Bonanza is over 1,000 feet long, eight feet wide, seven feet high, and laid with double-T railroad tracks, starting on the north bank of Chase Gulch and running almost due north, through Maryland or Bonanza, Mountains,



already cutting in its course ten well defined fissure veins, nearly at right angles, varying in width from three to sixteen feet between walls, containing gold-bearing quartz, and yielding, as per assay test, from $7.05 to $660 per ton in gold, and designed to cut clear through the mountain, a distance of 4,340 feet in the surveyed course, of which thirty veins crop out on the surface—the greatest depth from the surface to be attained being 1,018 feet; and the Union over 600 feet long, of the same width and height as the former, and also equipped with double-T railroad tracks, starting on the south bank of Chase Gulch, nearly opposite the Bonanza tunnel, at the foot of Casto Mountain, through which it is designed to cut—a distance of 2,225 feet, the greatest depth from the surface being 604 feet; running almost due south, and already cutting nearly at right angles six well defined, gold-bearing fissure veins, varying in width from three to sixteen feet between walls, and containing ore similar in quantity and quality to that in the veins cut by the Bonanza tunnel; and for the working of both enterprises the Company has a complete plant of machinery, including Air-compressors, Air-drills, etc., with fire-proof iron and stone buildings for machinery and storage; output about 5,000 tons, now in the ore-bins awaiting treatment.

**Boss Group.**—Comprising the Boss, Valverde, Boss No. 2, and Las Vegas lodes, 1500x150 feet each; Hal Sayr and others, Central City, Colo., owners; claims situated in the Quartz Valley Mining district, two miles from Central City, Colo., and patented in 1880 and 1882; veins all fissures, with crevices from two to thirty feet in width, containing galena and bismuth carrying silver, which mill-run from $50 to $160 per ton, when sorted from the gangue-rock; Boss developed by a shaft 250 feet in depth and 1,000 feet of drifts; Boss No. 2 by a shaft 200 feet in depth and 200 feet of drifts; Valverde by an adit 300 feet in length; worked by a twelve-horse-power engine.

**Boston.**—Matthew O'Brian, James Downey, and George McCoggith, all Central City, owners; claim 1500x150 feet; situated in North Clear Creek, Quartz Valley Mining district, seven miles from Central City; located in 1872; vein a fissure, with a crevice five feet wide containing galena, assaying forty ounces silver per ton, with a quartz gangue; developed by a shaft thirty feet in depth.

**Bouvier Group.**—Four claims, viz.: Bouvier, Telephone, Phonograph, and Telegraph; situated on Quartz Hill, a little south of the Scandia and Egyptian; veins all fissures varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; developments—four shafts from ten to 50 feet in depth.

**Branch.**—Andrew Bitzenhofer and M. Altvater, both Central City, Colo., owners; claim 1500x150 feet; situated on Gregory Hill, Gregory Mining district, at Central City; located in 1860, and in process of patent; vein a fissure, with a crevice four feet in width, and a pay streak from eight to eighteen inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to nineteen ounces gold per cord, and the smelting-ore yielding $40 per ton; developed by a shaft eighty-five feet in depth and some drifting; output $2,000.

**Brighton.**—(See Atlantic and Brighton.)

**British-American Tunnel Company (The).**—Owns the British-American Tunnel site, on which the driving of a tunnel having its initial point on South Clear Creek is projected (no work yet having been done), in a northerly direction, through the mineral belt of Quartz Hill, to the Silver district beyond on North Clear Creek, a few miles above Black Hawk, cutting the veins in Bellevue, Quartz, Gunnel, and Winnebago Hills, the

principal of which at the following depths from the surface; Champion 3,000 feet deep, White Cloud 2,300 feet, Pewabic 1,500 feet, Leavenworth 1,600 feet, Alps 2,000 feet, California and Kansas from 1,600 to 1,800 feet, and the Winnebago and others at 1,000 feet; the first 5,000 feet from the entrance, the tunnel will penetrate through ground on which there are no developed properties, though many prospects, some of which may prove valuable; but within the next three miles it will intersect over sixty well-known lodes, which have been thoroughly explored and their value established, besides many of lesser importance.

**Broad Vein.**—David S. Green and S. M. Linn, Pennsylvania, owners; claim 1500x50 feet; situated in Quartz Valley Mining district; located in 1881; vein a fissure, with a crevice four feet in width, and a pay streak from six to twenty inches, containing galena carrying silver and iron and copper pyrites carrying gold, which mill-runs, when sorted from the gangue-rock, from $13 to $40 per ton; developed by two shafts 83 and 100 feet in depth, respectively; property is making some shipments of ore.

**Brooklyn Eagle.**—John E. Morris, Central City, and Benjamin Lewis, Brooklyn, N. Y., owners; claim 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, at Central City; located in 1874, and patented in 1880; vein a fissure from three to five feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to seven and one-half ounces gold per cord, and the smelting-ore yielding $87 net per ton; developed by three shafts, twenty-eight, forty, and seventy-four feet in depth, and forty feet of drifting.

**Bunker Hill.**—William O. McFarlane, L. Shaffnit, Nicholas Paulus, and L. Seige, all Central City, owners; claim 1500x150 feet; situated in Freeman Gulch, Independence Mining district, six miles from Central City; vein a fissure four feet wide, containing iron and copper pyrites (a smelting-ore), which mill-runs, when sorted, $60 net per ton; developed by a shaft sixty feet in depth and some other workings.

**Burrough's Extension.**—Richard Mackey, Nevadaville, Colo., owner; claim 300x50 feet; situated on the Burrough's vein, west of the Mackey lode, on Quartz Hill, Nevada Mining district, one mile from Central City; located in 1860, and patented in 1878; vein a fissure, with a crevice from two to six feet wide, and a pay streak from six to thirty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore about $20 per ton; developed by a shaft 400 feet in depth; output $20,000.

**Caledonia and Caledonia No. 2.**—John Henderson, D. J. McKay, John B. McKay, and Eugene and Alonzo Drake, all Central City, owners; claims 1500x150 feet each; situated in Lake Gulch, Lake Mining district, one and one-half miles from Central City; located in 1878, and patented in 1879; vein a fissure, with a crevice three feet wide, pay streak eighteen inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to five ounces gold per cord, and the smelting-material about $100 net per ton; developed by a shaft 325 feet deep and one seventy-foot level; output over $10,000.

**California.**—George Darsie, Frankfort, Kentucky, and H. P. Nelson, San Francisco, Cal., owners; claim 1500x150 feet; situated three miles from Gold-dirt, Central Mining district; located in 1876, and patented in 1882; vein a fissure seven feet wide, pay streak about eighteen inches, containing



gray copper, which mill-runs from $300 to $4,000 per ton when sorted from the quartz gangue; developed by two shafts ninety feet in depth each, and a drift 150 feet connecting both shafts.

**California Gold Mine Company.**—(*Limited*); incorporated under the laws of Great Britain; capital stock £130,000 in 130,000 shares of £1 each; president, John Elliot; secretary, E. Penman—both London, Eng.; general manager, Alfred Rickard, Idaho Springs, Colo., offices Idaho Springs and 58 Lombard street, London, Eng.; owns the California and Hidden Treasure, two adjoining claims on the same vein, covering 1,050 and 750 feet, making 1,800 lineal feet on one vein; situated on Quartz Hill, Nevada Mining district, one mile from Central City, Colo.; vein a fissure, with a crevice three feet in width, containing gold-bearing quartz and considerable iron and copper pyrites, the stamp-rock milling, when sorted, an average of $12.65 per ton, and the smelting-material probably $50; California developed by a shaft 1,370 feet deep, 1,040 feet of drifts, 246 feet of winzes and 657 feet of ground removed by the present Company, and 2,000 feet of drifts run before the property came into the possession of the present owners; Hidden Treasure is worked through the California shaft; property is operated by two fifty-horse-power engines made by Fraser & Chalmers, Chicago, and the Company employs a force of 100 men; output from January 1 to December 1, 1880, $120,756.35 net, and from August 28, 1882, to January 1, 1883, $64,506.17; and the Hidden Treasure Mill (see Hidden Treasure Mill).

Also owns a stamp-mill built by Fraser & Chalmers, Chicago; situated at Black Hawk; building (frame) 100x50 feet, containing fifty Stamps; motive power for the same being supplied by a 150-horse-power engine; capacity for treating fifty tons of ore in twenty-four hours.

**Cameron Consolidated Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, M. S. Foster; secretary and treasurer, W. S. Ames; general manager and superintendent, W. D. Cameron—all New York City; offices 139 Broadway, New York, and Central City, Colo.; owns thirty-two lode claims, the most prominent of which are the Birdie, Bell, Genevieve, Sheridan Hill, Sheridan Hill Nos. 2, 3, 4, and 5, Deiderick, L DeBall, Robert E. Lee, M. S. Foster, all 1500x150 feet each; situated in Little Hamlin Gulch, Lincoln Mining district, Clear Creek County, and Vermilion Mining district, Gilpin County, and in process of patent; veins all fissures, with crevices from one to ten feet wide, containing galena and gray copper, assaying from 39 to 2,100 ounces silver per ton, with a quartz gangue-matter; developments—one 170-foot shaft on the DeBall, and on the others one shaft each from 10 to 100 feet in depth; and it is the purpose of the Company to develop the entire property by a cross-cut tunnel to cut all the veins at great depth.

**Camp Grove.**—John, George, and A. T. Sparks, all Nevadaville, Colo., owners; claim 660x150 feet; situated on Quartz Hill, Nevada Mining district, at Nevadaville; located in 1860, and patented in 1879; vein a fissure from two to four feet wide, pay streak eighteen inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from three to twelve ounces gold per cord, and the smelting-material about $50 per ton; developed by an eighty-five-foot shaft.

**Canandaigua.**—357x50 feet; situated in Spring Gulch, at Central City; located in 1860, and patented; vein a fissure from twenty to thirty-two inches wide, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock milling from two to eight ounces gold per ton, and the smelting-ore from $25 to $125 per ton; developed by one main shaft over 100 feet deep, with some drifting and stoping; property has recently been worked under lease.

**Cape May.**—Patrick D. Hughes, Black Hawk, owner; claim 1500x150 feet; situated at Clear Creek Gulch, three miles from Central City, Enterprise Mining district; located January 15, 1879; vein a fissure four feet wide, pay streak about nine inches, containing sulphurets of silver, which mill-runs, when sorted from the quartz gangue, eighty-four ounces silver per ton; developments—a shaft eighty feet in depth.

**Carr.**—Lou C. Snyder, Black Hawk, and Horace Atkins, Georgetown, owners; claim 600x50 feet; situated on Bobtail Hill, Gregory Mining district, at Central City; located in 1864, and patented; vein a fissure two feet wide, pay streak twelve inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from five to twelve ounces gold per cord, and the smelting-ore yielding $30 net per ton; developed by a shaft 250 feet in depth and 100 feet of drifting.

**Cashier Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $500,000, in 250,000 shares of $2 each, non-assessable; president, Stephen B. French; secretary and treasurer, James M. Coleman—both New York; general manager, Peter French, Central City, Colo.; offices 74 Broadway, New York City, and Central City, Colo.; owns a stamp-mill, situated at Black Hawk; main building 90x60 feet, containing thirty-five Stamps—motive power for the same being supplied by a fifty-horse-power engine; capacity—thirty tons in twenty-four hours; the Cashier, North Cashier, and South Cashier lodes, 1500x150 feet each; situated on Mammoth Hill, Central City Mining district, one-half mile from Central City; located in 1860, and patented; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz (free-milling) and iron and copper pyrites (smelting); developed by a shaft 350 feet in depth, with some drifting.

**Castleton.**—(See New Columbia Consolidated Gold and Silver Mining Company.)

**Centennial Tunnel and Mining Company (The).**—Incorporated under the laws of Colorado, in 1876; capital stock $500,000, in 500,000 shares of $1 each, non-assessable; president, John Tierney; vice-president, A. M. Jones; secretary, Elias Goldman; treasurer, Matthew Caldwell; general manager, John Tierney—all Central City, Colo.; office Miller Block, Central City, Colo.; owns the Centennial Tunnel site, 3000x6 feet, on which a tunnel is driven 500 feet long, cutting thirteen well-defined fissure veins, varying in width from six to twelve feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to nine ounces gold per cord, and the smelting-material yielding from $50 to $200 per ton; on which veins thirteen locations have been made, 1500x150 feet each; all, with the tunnel site, situated on German Mountain, Gregory district, at Central City, the last, or thirteenth vein—the Tierney—patented in 1872; developments—about 1,500 feet of drifting on the veins from the tunnel.

**Center, Oregon, and Pontiac.**—B. F. George and J. E. Leonard, both Denver, and John J. Reilley, Central City, owners; claims 1500x150 feet each; situated on Leavenworth Mountain, one and a half miles from Central City, Russell Mining district; located in 1880, and patented in 1882; vein a fissure, from ten to fifteen feet wide, pay streak from one to six feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-material about $50 per ton; developments—shaft 100 feet in depth, with some drifting.

**Central City Gold and Silver Mining Company (The).**—Owns the Scandia; situated on the divide between Russell and Leavenworth Gulches; vein a fissure varying in width, and containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from one to ten ounces gold per cord, and the smelting-ore from $15 to $75 per ton, when sorted; developed by one double-compartment shaft over 300 feet deep, with over 400 feet of drifts and considerable stoping, and the property is in good shape for producing.



**Chance Group.**—(See First Chance Group.)

**Charter Oak.**—(See Aurora Gold Mining and Milling Company.)

**Chemung.**—Thomas H. Potter and others, Central City, Colo., owners; claim 1500x150 feet; situated in Lake Gulch, Lake Mining district, one mile from Central City, Colo.; located in 1859; vein a fissure, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-material yielding about $50 per ton; developed by one shaft 100 feet deep and some drifting.

**Chihuahua.**—Thomas H. Potter, Central City, and Wm. H. Bush, Denver, Colo., owners; claim 1500x150 feet; situated in Missouri Gulch, Mountain House Mining district, three miles from Central City; patented in 1878; vein a fissure, with a crevice two and one-half feet wide, and a pay streak from twelve to eighteen inches containing galena, assaying 200 ounces silver per ton, with a quartz gangue; developed by a shaft eighty feet in depth and a tunnel 200 feet in length, with some drifting.

**Clay County.**—Jerome B. Chaffee, New York City, and John A. Logan, Chicago, Ill., owners; claim 1500x150 feet; situated in Lake Gulch, Lake Mining district, one and one-half miles from Central City, Colo.; located in 1858, and patented; vein a fissure, with a pay streak three and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to five ounces gold per cord, and the smelting-material from $50 to $150 per ton, with some galena; developments—one shaft 320 feet deep and 300 feet of levels; output twenty-five cords of stamping-ore and from thirty to fifty tons of smelting per month; property is leased for four years from November 1, 1881, to A. S. Bushners and Geo. W. Mabee, both Central City.

**Clayton.**—Patrick Meagher, Alexander McLeod, and John Goggin, all Central City, Colo., owners; claim 1500x150 feet; situated at East Nevadaville, Nevada Mining district; located in 1861; vein a fissure, with a crevice eight feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two and one-half ounces gold per cord, and the smelting-material about $50 per ton; developed by a shaft 120 feet deep and some drifting; output $3,000.

**Clifford Group.**—D. W. Rockwell and E. Buford, both Georgetown, Colo., owners; group embraces five claims, 1500x150 feet each; situated in Vermilion Mining district, six miles from Central City; located in 1882; vein a fissure, with a crevice from four to six feet wide, and a pay streak from ten to eighteen inches of chlorides and galena, which assays from 250 to 1,000 ounces silver per ton, with a quartz gangue; developed by one main shaft fifty-five feet in depth and other shafts aggregating 200 feet.

**Colorado.**—Richard Mackey, Nevadaville, Colo., owner; claim 1500 x150 feet; situated on Mt. Pisga, Lincoln Mining district, four miles from Central City; located in 1876, and patented in 1879; vein a fissure, with a crevice four feet in width, containing galena assaying 100 ounces silver per ton; developed by a shaft ninety feet in depth.

**Colorado Champion.**—Wm. Queen, Martin and Thomas Pierce, all Central City, owners; claim 1500x150 feet; situated at the mouth of Willis Gulch, in Russell Gulch, Russell Mining district, two and one-half miles from Central City, Colo.; vein a fissure, with a crevice from two to five feet in width, containing copper pyrites, gray copper, and sulphurets, assaying from 50 to 150 ounces silver per ton, with a quartz gangue; developed by a shaft sixty-four feet in depth.

**Colorado Chief.**—Curtis P. Updegraff, W. W. Tiffany, L. S. Newell, and A. Westman, all Central City, owners; claim 150x1500 feet; situated on Silent Friend Mountain, one and one half miles from Central City, Enterprise Mining district; located in 1879; vein a fissure four feet wide, pay streak from six to eighteen inches, containing galena and zinc blende in a quartz gangue, which mill-runs, when sorted, $40 net per ton; developed by shaft seventy-five feet in depth.

**Columbia.**—(See New Columbia Consolidated Gold and Silver Mining Company.)

**Columbia Avenue Group.**—H. R. Shock, P. C. Thomson, and L. W. Roberts, all Philadelphia, owners; L. W. Roberts, manager; office Central City, Colo.; group comprises the Columbia Avenue, Roberts (west extension of Columbia Avenue), Nettie (east extension of Columbia Avenue), Little Major, Cromie, Lambert, Justice, and one-half interest in the Congress and Senate lodes, 1500x150 feet each; situated on Prosser Mountain, Eureka Mining district, three-fourths mile from Central City; located in 1879; Columbia Avenue patented in 1882; veins all fissures, with crevices from one to four feet wide, and pay streaks from six inches to two feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to nine ounces gold per cord and the smelting-material from $40 to $90 per ton; Columbia developed by a shaft 470 feet deep and 600 feet of drifts and levels, through which workings all the other claims are operated; improvements—one twenty-horse-power engine, with the necessary buildings; output about 400 tons.

**Columbia Group.**—Comprising the Columbia, New York, Burroughs, Thomas Freeman, Colorado, Argo, Vidette, Copper Bottom, Corydon, Cork, Esperanza, Baker, and Triangle lodes; Hal. Sayr, Central City, and Henry M. Teller, Denver, Colo., owners; claims situated on the north slope of Quartz Hill, Nevada Mining district; located from 1859 to 1880, and patented; veins all fissures, with pay streaks from two to four feet in width containing gold-bearing quartz and iron pyrites, the stamping-ore milling, when sorted, from two to twelve ounces gold per cord, and the smelting-ore from $45 to $100 per ton; property is now being developed by a cross-cut tunnel 140 feet long, starting on the Columbia, designed to open up all the above-mentioned lodes; other developments on Columbia—thirty shafts from 20 to 132 feet in depth and 300 feet of drifting; on Burroughs one shaft seventy-one feet in depth, on Baker one shaft 270 feet in depth, on Thos. Freeman six shafts from twenty to ninety-five feet in depth; on the others shafts and drifts aggregating 500 feet; output 400 tons of ore.

**Columbia Tunnel.**—Site 3,000x6 feet; Henry M. Teller and Hal Sayr, of Central City, Colo., owners; on which a tunnel is driven 140 feet long, designed to cut the Columbfa, Corydon, Colorado, Burroughs and others; veins on Quartz Hill. (See Columbia Group).

**Consolidated Bobtail Company.**—Incorporated under the laws of Colorado, in 1872; capital stock $1,136,630, in 227,326 shares of $5 each; president and general manager, A. N. Rogers; secretary, Frank Messinger—both Central City; treasurer, John Stanton, New York City, N. Y., offices 76 Wall street, New York City, N. Y., and Central City, Colo.; owns the Bobtail Tunnel site, on which a tunnel is driven for the development of the entire property of the Consolidated Bobtail Gold Mining Company, and through it the same is worked; situated on Bobtail Hill, Gregory district; the work on this property being done by air-compressors, motive power for the same being supplied by a 100-horse-power engine, or sufficient to drive ten drills; improvements—one tram-way, 1,400 feet long, run on a gravity plane, connects the tunnel with the Company's mill, over which 125 tons of ore per day can be transported; Company employs 100 men.



**Consolidated Bobtail Gold Mining Company (The).**—Secretary, Frank Messinger; general manager and superintendent, A. N. Rogers; assistant superintendent, Edward M. Rogers—all Central City, Colo.; treasurer, John Stanton, New York City; office Central City, Colo.; owns the following lode claims: Bobtail 1,072 feet in length, Mammoth 675 feet, Gregory 200 feet, Warwick 1,200 feet, Annie 1,500 feet, Broadway 1,200 feet, Good Return 800 feet, Branch 700 feet, Sioux City 750 feet, Lizzie 1,500 feet, Hidden Wealth 1,500 feet, and Mollie Stark 1,500 feet, all 150 feet in width; situated on Bobtail Hill, Gregory and Bobtail Mining district, at Central City; all patented with exception of Sioux City, Hidden Wealth, Warwick, and Annie; veins all fissures, with crevices from four to five feet in width, containing gold and silver bearing quartz, and iron and copper pyrites, the stamp-rock milling when sorted, from one and one-half to two ounces gold per cord, and the smelting-material yielding $75 net per ton; the property being operated through the Bobtail tunnel (see Consolidated Bobtail Company); improvements—Worthington Steam Pumps, capable of raising 600 gallons of water per minute, motive power being supplied by two fifty-horse-power engines; output 400 cords of stamping-ore per month.

Also owns a stamp-mill situated at Black Hawk; main building, constructed of iron and wood, is 170x90 feet, and contains 125 Stamps, motive power for the same being supplied by five twenty-horse-power engines, and has capacity to treat 125 tons of ore in twenty-four hours.

**Cottage Group.**—Comprising the Cottage, Cottage Extension, Elevator, A. W. Knight, Lafayette, Pilot, St. Patrick, Liberty, Polar, and Samson, covering fifty acres of surface ground; A. M. Albro and A. W. Knight, both Nevadaville, Colo., owners; claims situated in the Quartz Valley Mining district, one mile from Central City; located in 1878 and 1879; veins all fissures, with crevices from two to eight feet in width, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from two and one-half to five ounces gold per cord, and the smelting-ore yielding from $40 to $160 per ton, with some carbonates; Cottage developed by a shaft 105 feet in depth, and a drift fifty-five feet in length, Cottage Extension by a shaft forty feet in depth, and Elevator by a shaft thirty feet in depth.

**Crawford County.**—(See Wyandotte Consolidated Gold and Silver Mining Company.)

**Cycolps Silver Mining Company (The.)**—Incorporated under the laws of New York, October 21, 1882; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president and manager, W. D. Cameron, New York City; vice-president, Sidney W. Tyler, Central City, Colo.; secretary and treasurer, M. S. Frost, New York City; offices 139 Broadway, New York City, and Central City, Colo.; owns the Cyclops, Cyclops No 2, St. James, and Julia lodes, 1500x150 feet each; situated on Silver Mountain, Enterprise Mining district; located in 1878, and patented in 1882; veins all fissures, with crevices from one to five feet in width, and pay streaks from eight to thirty inches, containing galena in a quartz gangue, which mill-run, when

sorted, 109 ounces silver per ton; developed by one main shaft 350 feet in depth, with levels at depth of 100 feet aggregating 200 feet, at 260 feet aggregating seventy-two feet, at 310 feet aggregating seventy-two feet; worked by a forty-five-horse-power engine and other improved machinery; output to January, 1881, $90,589, and during 1882 the Company has been doing development work, but shipped in November and December 200 tons, averaging 125 ounces silver per ton, after sorting.

**Dallas.**—(See Midos Gold and Silver Mining Company.)

**Dead-broke.**—Harley B. Morse and John Jordan, both Central City, Colo., owners; claim 1500x150 feet; situated in Quartz Valley Mining district, one mile from Central City, Colo.; located in 1878, and in process of patent; vein a fissure, containing galena in a quartz gangue, which mill-runs, when sorted, from 200 to 700 ounces silver per ton; developed by a shaft eighty-five feet in depth; output $500.

**Deadwood Placer.**—M. Dumford, J. H. Jones, and J. P. Leeming, all Georgetown, Colo., owners; claim covers twenty-seven acres of placer ground; situated at South Boulder, South Boulder Mining district, one mile from Rollinsville, Colo.; developed by 600 feet of thirty-inch and 400 feet of eighteen-inch fluming; output estimated at $50,000.

**Decatur Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock $1,500,000, in 300,000 shares of $5 each, non-assessable; president, W. K. Marvin; vice-president, Dudley Farlin; treasurer, S. W. Sears; secretary, Charles W. Guffin—all New York City; superintendent, Henry Paul, Idaho Springs, Colo.; offices Idaho Springs, Colo., and No. 66 Broadway, New York City; owns the following lodes, viz.: Decatur, Helmer, Hershal, and Paul; situated in Willis Gulch, Russell Mining district, two and one-half miles from Central City; located from 1869 to 1876, and patented in 1882; veins all fissures, containing gold-bearing quartz and iron pyrites, the stamp-rock from the Decatur and Hershal milling, when sorted, from five to fifteen ounces gold per cord, and from the other claims about two and one-half ounces, and the smelting-material about $100 per ton; Decatur developed by a 200-foot shaft, Helmer by a 280-foot shaft, Paul by four shafts from twenty to sixty feet deep, and Hershal by one 100-foot shaft; worked by a twenty-horse-power engine, and a six-inch pump,

**Del Monte Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, I. R. Bishop; vice-president, V. S. Edwards; secretary, C. D. Pierce; treasurer, J. O. Eberhard, M. D.—all Philadelphia, Pa.; general manager, Wm. H. Cheatley, Central City, Colo.; offices 140 South Third street, Philadelphia, and Central City; owns the Del Monte lode, 1500x150 feet; situated on Bald Mountain, Nevada Mining district, two and one-half miles from Central City; located in 1881, and patented in 1882; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz (free-milling) and iron and copper pyrites (smelting), with some galena; developed by a shaft 130 feet in depth.

**Del Norte.**—Edward W. Henderson and the estate of John Smock, both Central City, Colo., owners; claim 1500x150 feet; situated on Silver Hill, Enterprise Mining district, at the town of Black Hawk; located in 1875; vein a fissure, with a crevice three feet wide, containing gray copper and galena, assaying 330 ounces silver per ton, with a quartz gangue; developed by a shaft eighty feet in depth and a tunnel thirty feet in length, on the vein.



**Delinquent and Delinquent Extension.**—Richard Mackey and James Mackey, both Nevadaville, Colo., owners; claims 1500x150 feet each; situated on Mt. Pisga, Wide-awake Mining district, eight miles from Central City; located in 1872; vein a fissure, with a crevice four feet in width, containing galena in a quartz gangue; developed by two shafts fifteen and thirty feet in depth.

**Denmark.**—Holman Bros., Central City, Colo., owners; claim 1423x150 feet; situated on Bobtail Hill, Gregory Mining district, near Central City, and patented; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from six to twenty eight ounces gold per cord, and the smelting-material probably $50 per ton; developed by one 200-foot shaft.

**Denver.**—John J. Reilley, Central City, and Charles Sprague, Black Hawk, Colo., owners; claim 1500x150 feet; situated on Maryland Mountain, three-fourths mile from Central City; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to nine ounces gold per cord, and the smelting-material about $50 per ton; developed by several shafts from twenty to sixty feet in depth and an adit on the vein 100 feet in length; the vein in this claim will be opened up by the Bonanza Tunnel.

**Denver Gold Company (The).**—(*Limited*); incorporated under the laws of Great Britain; capital stock £60,000, in 60,000 shares of £1 each; president, F. Powell; secretary, J. Jameson Truraw—both London, England; general manager, F. S. Craven; financial agent, W. Hanson—both Nevadaville, Colo.; offices No. 184 Gresham House Road, London, England, and Nevadaville, Colo.; owns the following patented lodes: Kansas, 1200x50 feet; Kansas Extension, 1500x150 feet; Irish Flag, 650x50 feet; and Camp Grove, 340x50 feet; situated on Quartz Hill, Nevada Mining district; veins all fissures, with crevices averaging three and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to twelve ounces gold per cord, and the smelting-material from $50 to $200 per ton; the developments are principally on the Kansas, consisting of one shaft 1,350 feet deep, with levels running therefrom at intervals of fifty feet; improvements—one fifty-horse-power engine, with the necessary buildings; output from twenty to forty tons per day; and the Tennessee Tunnel site, 3000x6 feet, located in 1860, and situated on Quartz Hill, Nevada district, on which a tunnel is driven, cutting a number of well defined fissure veins, varying in width, and containing ore similar in quantity and quality to that in the veins already described, and on which locations have been made.

Also owns stamp-mill, situated at Nevadaville, Colo.; main building 100x100 feet; containing fifty-two Stamps, with a capacity to treat fifty tons in twenty-four hours.

**Di Vernon.**—Situated on Quartz Hill, Nevada district, a little east of the Kansas mine; vein a fissure, with a pay streak about twenty inches wide, containing gold-bearing quartz and iron and copper pyrites, both yielding fairly; developments—one tunnel on the vein seventy feet from the surface.

**Dorchester, Wilson, and Boston.**—W. O. McFarlane, Alexander McLeod, Wm. Nicholson, and George Furman, all Central City, Colo., owners; claims 1500x150 feet each; situated in Russell Gulch, Russell Mining district; located in 1859; veins all fissures, with crevices from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore yielding $60 per ton; Dorchester developed by a shaft 200 feet in depth, and the others by surface workings; output about $30,000.

**Double-eagle and Eagle.**—Hal. Sayr, Central City, Colo., and Isaac F. Roe, New York, N. Y., owners; Double-eagle 485x150 feet, Eagle 1500x150 feet; situated in Lake Gulch, Lake Mining district, one and one-half miles from Central City, and patented ; veins both fissures, with crevices from two to three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to fifteen ounces gold per cord, and the smelting-material about $40 per ton; developed by a shaft 380 feet in depth and 600 feet of drifts.

**Dutchman Gold and Silver Mining Company (The).**—Incorporated under the laws of New York in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and treasurer, W. L. Brown; secretary, J. H. Russell—both New York City; agent, Sidney W. Tyler, Central City, Colo.; offices 25 Park Row, New York, N. Y., and Central City, Colo.; owns the Dutchman lode, 1100x150 feet; situated on Quartz Hill, Nevada Mining district; located in 1878; vein a fissure, with a crevice from two to three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to five ounces gold per cord, and the smelting-material $65 per ton; developed by a shaft 165 feet in depth and seventy-five feet of drifting.

**Eagle.**—(See Double-eagle.)

**East Flack.**—John Sparks and others, Nevadaville, Colo., owners: claim 125x50 feet; situated on Quartz Hill, Nevada Mining district, one-half mile from Nevadaville; located in 1860; vein a fissure, with a crevice from three to six feet wide, and a pay streak two feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to ten ounces gold per cord, and the smelting-ore yielding from $75 to $200 per ton; developed by a shaft 700 feet in depth, with considerable drifting; improvements—one twenty-horse-power engine, with the necessary buildings; output $150,000.

**East Haseltine.**—Truscott, Mellour & Co., Russell Gulch, owners; claim 1500x150 feet; situated in Willis Gulch, Russell Mining district, three miles from Central City; vein a fissure from twelve to eighteen inches wide, containing sulphurets of silver, milling $85 net per ton, with a quartz gangue-matter; developed by a shaft forty-five feet in depth and a drift twenty-five feet in length.

**East Williams.**—(An extension of the Williams); Hal. Sayr and Thomas H. Potter, both Central City, Colo., and Isaac F. Roe, New York City, owners; claim 1500x150 feet; situated in Lake Gulch, Lake Mining district; vein a fissure, with similar characteristics to the Williams; developed by a cross-cut and adit 275 feet in length, opening up the vein.

**Eddy.**—George P. Smith & Co., Denver, owners; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, three miles from Central City; vein a fissure four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two and one-half ounces gold per cord, and the milling-material about $40 per ton; developed by a shaft 100 feet deep.

**Egyptian Group.**—Comprising the Egyptian, 290x150 feet, Egyptian Side, 1400x150 feet, and Pike's Peak, 600x50 feet; W. O. McFarlane and Thos. F. Bonner, both Central City, Colo., L. C. Snyder and Edward Kerts, both Black Hawk, Colo., owners; claims situated on the same vein and on Quartz Hill, Nevada Mining district; located in 1859, and patented in 1881; vein a fissure, with a crevice from one to ten feet wide, and a pay streak from six to thirty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-material yielding $75 net per ton, with some galena; Egyptian developed by one shaft 675 feet deep and 1,500 feet of drifting, Pike's Peak by a shaft 100 feet deep, and the Egyptian Side by some surface openings; output in 1881-82 $75,000; monthly shipments 400 tons.



**Ellis and Lump Gulch Placers.**—Isaac Freese, Central City, Colo., and Peter Peterson, Lump Gulch, Colo., owners; claims cover fifty-two acres; situated in Lump Gulch, Central Mining district; located from 1874 to 1882; the developments consisting of some ditching and sluicing.

**Empire.**—Thos. H. Potter and Harley B. Morse, both Central City, owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, one and one-fourth miles from Central City; located in 1859,and patented in 1879; vein a fissure, with a crevice from three to four feet wide, carrying gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, three and one-half ounces gold per cord, and the smelting material yielding about $40 per ton; developed by three shafts from fifty-five to sixty-five feet in depth.

**Empire Mill.**—George Ellis Smith and Hugh P. Smith, both London, Eng., and Wm. Wain and Taylor Linsley, Central City, owners; manager, Wm. Wain; building (frame) 60x40 feet; situated at the mouth of Chase Gulch, and contains twenty-five Stamps; motive power for the same being supplied by a twenty-five-horse-power engine; capacity twenty-five tons in twenty-four hours.

**Empire Mining and Milling Company (The).**—Incorporated under the laws of Colorado in 1879; capital stock $15,000, in 150 shares of $100 each, non-assessable; president and secretary, Charles Gage, St. Louis, Mo.; vice-president and manager, William Linsley, Central City, Colo.; treasurer, John W. Harrison, St. Louis, Mo.; office Central City, Colo.; owns the Wain, Linsley, and Cross lodes, 1500x150 feet each; situated in Chase Gulch,Gregory Mining district; Wain patented in 1882; veins all fissures, with crevices about five feet wide, containing gold bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to fifteen ounces gold per cord, and the smelting-material about $30 per ton; developed by a shaft 200 feet deep and 400 feet of levels; output seventy-five tons per month.

**Empire Tunnel and Hope.**—John Tierney, Wm. Burk, and Elias Goldman, all Central City, owners; claims cover 3000x150 feet on the same vein; situated at the foot of Gregory Hill, Gregory Mining district; located in 1860,and patented in 1876; vein a fissure, with a crevice from three to four feet wide, containing gold-bearing quartz and iron and copper pyrites the stamp-rock milling, when sorted, four ounces gold per cord, and the, smelting-material about $40 per ton; Hope developed by a shaft 200 feet deep, and the Empire Tunnel by a tunnel 100 feet long.

**Empress.**—(See Indiana Group.)

**Empress Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $500,000, in 250,000 shares of $2 each, non-assessable; president, James Howell; secretary and treasurer, J. Schenk—both Brooklyn, N. Y.; general manager, Peter French, Central City, Colo.; offices 13 Barclay street, New York City, and Central City; owns the Empress lode, 1500x150 feet, situated on Mammoth Hill, Lake Mining district, three-fourths of a mile from Central City; located in 1875, and patented in

1879; vein a fissure, with a crevice from two to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one and one-half to ten ounces gold per cord, and the smelting-material yielding from $50 to $100 per ton; developed by a shaft 420 feet in depth and 500 feet of drifts; improvements—one fifty-horse-power engine, with the necessary buildings.

**English.**—(See Hard Money Group.)

**Enterprise.**—Thomas H. Potter, Nels Johns, and Wm. H. Cheatley, all Central City, Colo., owners; claim 1500x150 feet; situated on Bellevue Mountain, at the head of Virginia Cañon, Virginia Mining district, three miles from Central City; located in 1879, and patented in 1882; vein a fissure, with a crevice six feet wide, containing gold and silver bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting material yielding about $40 per ton; developed by four shafts, 20, 30, 35, and 106 feet deep; output forty tons.

**Enterprise Consolidated Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $200,000, in 100,000 shares of $2 each, non-assessable; president, S. Goosthal; secretary, W. Schaller—both New York; superintendent, J. B. Tomlinson, Jr., Boulder, Colo.; offices 30 Broad street, Room 6, New York City, and Boulder, Colo.; owns the Curlew lode, 1500x150 feet; situated three-fourths mile west of Black Hawk, in the Enterprise Mining district; located in March, 1876; vein a fissure, with a crevice eight feet wide, and two pay streaks two and two and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-material yielding $50 per ton; developed by a tunnel on the vein 167 feet long and 160 feet of shafts.

**Evangeline.**—Peter French and Peter Holland, both Central City, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Illinois Central Mining district, one and one-half miles from Central City, Colo.; located in 1860; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, eight ounces gold per cord, and the smelting-material from $75 to $100 per ton, with some argentiferous galena; developed by two shafts forty and fifty-two feet in depth.

**Exchequer.**—(See Surprise and Exchequer.)

**Fairfield.**—(See North Fairfield.)

**Fairview.**—Stephen Murdock and David Mishler, both Central City, owners; claim 1500x150 feet; situated on Dorey Hill, two and one-half miles from Central City, Mountain House Mining district; relocated in 1880; vein a fissure from one to three feet wide, pay streak from eight to ten inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, one-half ounce gold per cord, and the smelting-material from $100 to $150 per ton; developed by one sixty-foot shaft.

**Fanny.**—George P. Smith and O. F. Rhoads, both Denver, owners; claim 1500x150 feet; situated on Pewabic Hill, Russell Mining district, three miles from Central City; located in 1874; vein a fissure about four feet wide, pay streak twenty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from eight to ten ounces gold per cord, and the smelting-material yielding about $40 per ton; developed by three shafts, 15, 20, and 150 feet in depth, and 175 feet of drifting.



**Fanny.**—Sidney W. Tyler, E. A. Lynn, John Gray, and B. F. Pease, all Central City, Colo., owners; claim 1500x150 feet; situated on Silver Mountain, Enterprise Mining district, one mile from Black Hawk; located in 1878; vein a fissure, with a crevice from two to six feet wide, and a pay streak from ten inches to five feet, containing native and brittle silver, milling, when sorted from the quartz gangue, 150 ounces silver per ton; developed by a shaft 200 feet in depth and 300 feet of drifting; output $20,000.

**Fanny.**—(See Hidden Treasure and Fanny.)

**First Centennial and Belden-Tennal.**—Robert S. Haight and John B. Ballard, both Central City, and Richard Mosley and L. C. Snyder, both Black Hawk, Colo., owners; claims 1101x150 feet each; situated on Winnebago Hill, Gregory Mining district, at Central City; patented September, 1876; veins both fissures, with crevices from two to eight feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to six ounces gold per cord, and the smelting-ore about $40 per ton; developed by a tunnel 675 feet in length, a shaft 155 feet deep, and 600 feet of levels; output $20,000.

**First Chance Group.**—Comprising the First Chance, Second Chance, Tiger, Victoria, Warren, Mammoth, Philadelphia, Omaha, Seven-Thirty, Great West, and New Jersey, 1500x150 feet each; Isaac Freese, Central City, Colo., and Peter Peterson, Lump Gulch, Colo., owners; claims situated in Lump Gulch, Central Mining district, seven miles from Central City; located from 1874 to 1881, and First Chance, Tiger, and Victoria in process of patent; veins all fissures, with crevices from ten inches to fifteen feet wide, and pay streaks from six inches to six feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to seven ounces gold per cord, and the smelting-material about $35 per ton, with some galena; First Chance developed by four shafts from ten to thirty-five feet in depth, Tiger by three shafts from twenty to forty-five feet, Victoria by three shafts from ten to forty feet, Philadelphia by four shafts from thirty to sixty feet, Seven-Thirty by two shafts fifteen and thirty-five feet, Great West by a forty-foot shaft, and New Jersey by two shafts fifteen and twenty-five feet; output 300 tons.

**First Venture Mining Company (The).**—Composed of F. H., Walter, Maud, and Hugh P. Smith, and George Ellis, all London, Eng.; agent, William Linsley, Central City, Colo; owns the Next President lode, 1400x50 feet; situated in Packard Gulch, Gregory Mining district, at Central City; vein a fissure, with a crevice five feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore yielding $70 per ton; developed by a shaft 250 feet deep and three levels 100 feet long each.

**Fisk.**—Thos. S. Moore, New York, trustee; G. E. Randolph, Central City, Colo., agent; claim 290x50 feet; situated at Black Hawk, Gregory Mining district; located in 1859, patented in 1870; vein a fissure, with a crevice from one to three feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to eleven ounces gold per cord, and the smelting-material yielding about $25 per ton; developed by a shaft 700 feet deep; output $500,000; the property being worked out to a depth of 500 feet and being held under lease to December, 1884.

**Fisk Mabee.**—Owned by a company, for which Henry Wolcott, Denver, Colo., is agent; leased to Stephen Hoskins & Co., Central City, Colo.; claims 300x50 feet; situated on the Fisk vein and on Bobtail Hill, Gregory Mining district, and patented; vein a fissure, with a crevice three feet in width,

containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from five to ten ounces gold per cord, and the smelting-ore yielding $100 per ton; developed by a shaft 700 feet in depth, with some drifting; improvements—one twenty-horse-power engine, with the necessary buildings; output thirty cords per month.

**Flack.**—(See East Flack.)

**Foote and Simmons.**—John Miller, Central City, Colo., owner; claim 500x50 feet; situated on Gregory Mountain, Gregory Mining district, at Central City, and patented; vein a fissure, with a crevice from two to eight feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-material yielding $60 net per ton; developed by a shaft 600 feet in depth, with some drifting and stoping; property was a heavy producer from 1861 to 1868.

**Fourth of July.**—W. H. Doe, Idaho Springs, Colo., and the estate of B. C. Waterman, Pitkin, Colo., owners; claim 1500x150 feet; situated in Nevada Gulch, Nevada Mining district, one mile from Central City; vein a fissure, with a crevice from three to four feet wide, pay streak four inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three and one-half to fifteen ounces gold per cord, and the smelting-material yielding about $40 per ton; developed by a shaft 310 feet in depth, with some drifting.

**Freese and Peterson Mill.**—Isaac Freese, Central City, Colo., and Peter Peterson, Lump Gulch, owners; building (frame) 40x24 feet; situated in Lump Gulch, seven miles from Central City, Colo.; containing fifteen Stamps, motive power for the same being supplied by a twelve-horse-power engine; besides which there is excellent water-power for running the mill, originally designed by the owners for the treatment of their own ore, exclusively.

**Freiberg Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $250,000, in 1,000 shares of $250 each, non-assessable; president, George H. Van Vleck, Buffalo, N. Y.; agent, Sidney W. Tyler, Central City; offices Buffalo, N. Y., and Central City, Colo.; owns the Freiberg and South Freiberg lodes, 1500x150 feet each; situated on Negro Hill, Eureka Mining district, one-half mile from Central City; located in 1880; vein a fissure, with a crevice from two to four feet wide, containing gold-bearing quartz and iron and copper pyrites, with some galena, the stamp-rock milling, when sorted, from one and one-half to six ounces gold per cord, and the smelting-ore $100 per ton; developed by a shaft 275 feet deep and 300 feet of levels; worked by a fifteen-horse-power engine; output 1,000 tons.

**Galena.**—(See Palms Gold Mining Company.)

**George Wellington.**—Sidney W. Tyler, Geo. H. Gray, E. A. Lynn, and J. G. Skellinger, all Central City, owners; claim 1500x150 feet; situated on Toronto Hill, Mountain House Mining district, three miles from Central City; located in 1878, and patented in 1882; vein a fissure, with a crevice fifteen feet in width, containing galena with brittle and ruby silver in a quartz gangue, which mill-runs, when sorted, from $10 to $150 per ton; developed by a shaft ninety feet in depth and thirty feet of drifts; output $1,000.

**George W. Ellery.**—(See Belden and Tennel Mining Company.)



**German.**—(See Susquehanna Gold and Silver Mining Company.)

**German Tunnel Company (The).**—Incorporated under the laws of Colorado, in 1872; capital stock $15,000, in 30 shares of $500 each, non-assessable; president and manager, Alexander Carstans; vice-president, Wm. Lahmkuel; secretary, Samuel R. Lorah; treasurer, H. A. Krusa—all Central City, Colo.; office Central City; owns the German Tunnel site, 3000x6½ feet; situated at Central City, Central City Mining district; located in 1872; on which a tunnel is driven 700 feet in length, opening up eleven veins, on which lode claims have been located by the Company, 1500x150 feet each; veins all fissures, with pay streaks from six inches to three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from three to four ounces gold per cord, and the smelting-ore about $35 per ton; improvements—a complete plant of drilling machinery, the compressed air being supplied by water-power; output 500 tons.

**Gettysburgh.**—Joseph B. Hafer, Central City, Colo., owner; claim 1500x150 feet; situated on Bates Hill, Gregory Mining district, at Central City; located in 1869; vein a fissure, with a pay streak two and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, six ounces gold per cord, and the smelting-ore yielding $40 per ton; developed by a shaft 200 feet in depth and eight drifts aggregating 600 feet; output $35,000.

**Gold Coin Mining and Milling Company (The).**—Incorporated under the laws of Colorado, August 6, 1880; general manager, Paschal R. Smith; superintendent, James Collins; office Windsor Hotel Building, Denver Colo.; owns the Lucerne, Homestake, Prompt Pay, and Sunnyside, all patented claims, and the Gold Coin, Little Mattie, Boston Hop, Great Western, American Girl, Mountain-lion, Boston Bell, and Bellaire, 1500x150 feet each situated in Russell and Lake Gulches, Lake and Russell Mining districts, near Central City; veins all fissures, from one to four feet in width, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, from two to four ounces gold per cord, and the smelting-ore yielding from $40 to $200 per ton; Prompt Pay developed by a shaft 250 feet in depth and 200 feet of levels, Lucerne by a shaft 150 feet deep and 100 feet of levels, and the others by shafts from 20 to 100 feet deep.

**Gold Retort.**—James Mackey, Matthew Kelleher, and Patrick Murphy, all Nevadaville, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, at Nevadaville; located in 1881; vein a fissure, with a crevice two feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five and one-half ounces gold per cord, and the smelting-material yielding $65 per ton; developed by a shaft 100 feet deep.

**Golden Age Mining Company (The).**—Incorporated under the laws of New York; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, Samuel Eddy; secretary, I. E. Sayre; treasurer, J. C. Sanders—all New York City; general manager, James H. Pomeroy, Central City, Colo.; offices 145 Broadway, New York, and Central City, Colo.; owns the Golden Age lode (an extension of the Bobtail), 1500x150 feet; situated on Bobtail Hill, Gregory Mining district; located in 1860 as Golden Eagle, and patented in 1880; vein a fissure, with a pay streak from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to eight ounces gold per cord, and the smelting-material yielding from $50 to $400 per ton; developed by one main, double-compartment shaft, 315 feet deep, and three other shafts

200, 125, and 114 feet in depth, one level 200 feet long, other levels and drifts aggregating 300 feet, and some stoping; worked by one twenty-five-horse-power engine; output $18,000; and the property is in a good condition to ship.

**Golden Cloud.**—Thomas H. Potter, Central City, Colo., owner; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, two miles from Central City; patented in 1882; vein a fissure, with a crevice from four to five feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore about $40 per ton; developed by one shaft 140 feet deep and 300 feet of levels; worked by one fifteen-horse-power engine.

**Golden Eagle.**—(See Golden Age Mining Company.)

**Golden Eagle.**—Hal. Sayr, Central City, Colo., and Isaac F. Roe, New York, N. Y., owners; claim situated in Lake Mining district,one and one-half miles from Central City; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to eight ounces gold per cord, and the smelting-ore about $40 per ton; developed by a shaft 390 feet in depth, and levels are now being run at a depth of 220 and 360 feet from the surface.

**Golden Fleece.**—Owned by A. G. Elliott; situated on Bobtail Hill, a little north of the Golden Age mine; vein a fissure about four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from one to five ounces gold per cord, and the smelting-ore from $50 to $150 per ton, when sorted; developed by a shaft over 400 feet deep and about 600 feet of levels, with some stoping; the property has been a large producer.

**Golden Star.**—Nicholas Paulus, John Greer, and John Lee, all Central Cfty, owners; claim 1500x150 feet; situated on Quartz Hill, Central City Mining district, at Central City; relocated in 1881; vein a fissure, from one to two feet wide, pay streak four inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, one and one-half ounces gold per cord, and the smelting-ore $24 per ton; developed by a tunnel forty feet in length and a shaft fifty-two feet in depth.

**Golden Treasure.**—Harley B. Morse, Central City, owner; claim 1225x150 feet; situated on Nevada Hill, Nevada Mining district, one mile from Central City, Colo.; patented in 1880; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to thirty ounces gold per cord, and the smelting-ore yielding from $40 to $200 per ton, gross; developed by one shaft 300 feet deep and 400 feet of drifting; output $20,000.

**Golden Wedge.**—Patrick Meagher, Central City, Colo., owner; claim 1500x150 feet; situated on Nottaway Hill, Lake and Russell Mining districts, three-fourths mile from Central City; located in 1860; vein a fissure, with a pay streak from six to twelve inches, containing gold-bearing quartz and iron and copper pyrites, the stamping ore milling, when sorted, from two to eighteen ounces gold per cord, and the smelting-material about $35 per ton; developed by three shafts, thirty-five, fifty, and eighty feet in depth.

**Golden Wing.**—E. W. Williams & Co., Russell Gulch, owners; claim 1500x150 feet; situated at the head of Russell Gulch, in Russell Mining district, three miles from Central City; located in 1876; vein a fissure four feet wide, pay streak from seven to twenty inches, containing gold-bearing



quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from five to seven ounces gold per cord, and the smelting-ore about $40 per ton; developed by a shaft seventy-five feet in depth.

**Gomer.**—E. W. Williams & Co., Russell Gulch, owners; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, one and one-half miles from Central City; located in 1878; vein a fissure eight feet wide, pay streak from six to sixty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to eleven ounces gold per cord, and the smelting-ore about $40 per ton; developed by a shaft 104 feet in depth and a drift thirty feet in length.

**Gould Silver Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, F. M. Coegin, Norwood, Mass.; secretary, J. Abbott, Keene, New Hampshire; treasurer, J. G. Stewart, Jr., Boston, Mass.; general manager, Wm. E. O'Hea, Black Hawk, Colo.; offices 96 Milk street, Boston, and Black Hawk; owns the Joe Reynolds and Pollie lodes, 1500 x150 feet each; situated on Silver Mountain, Enterprise Mining district, three miles from Central City; located in 1880; veins both fissures, in the Joe Reynolds eight feet wide, pay streak from ten to forty inches, and in the Pollie three feet wide, pay streak ten inches, containing galena with native, ruby, and brittle silver and zinc blende in a quartz gangue, milling, when sorted, from 150 to 800 ounces silver per ton; developments—one 200-foot shaft and 150 feet of drifting; worked by a twenty-two-horse-power engine; output 100 tons.

**Grant Group.**—Comprising the Grant, Zryne, Cross, Kruse, Lincoln, and Jefferson lodes; Andrew Bitzenhofer, Alfred Wettstein, and H. J. Kruse all Central City, Colo., owners; claims 1500x150 feet each; situated between North Clear Creek and Freeman's Gulch, Vermilion Mining district, five miles from Central City; located in 1869 and 1882, and Grant in process of patent; veins all fissures, with crevices from ten to thirty inches in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, seven ounces gold per cord, and the smelting-material from $30 to $150 per ton; developments—on the Grant one ninety-foot shaft, on the Zryne one forty-eight-foot shaft, and on the others surface-workings, besides which the owners are running a cross-cut for the development of the entire property, now 140 feet in length, and a five-acre mill site adjoining the lode claims.

**Gray Copper.**—John Reilley, Hugh Loughran, and Frank Ingle, all Central City, Colo., owners; claim 1500x150 feet; situated north of Black Hawk, Bay State Mining district; located in 1881; vein a fissure, with a pay streak eighteen inches wide, containing native silver and sulphurets, assaying from 100 to 200 ounces silver per ton, with a quartz gangue; developed by a tunnel fifty feet in length and a shaft forty feet in depth.

**Gray Eagle.**—John E. Morris, Central City, owner; claim 1500x150 feet; situated on Nagle Hill, Eureka Mining district, two miles from Central City; located in September, 1882; vein a fissure seven feet wide, pay streak from four to six feet, containing sulphurets of silver, assaying 178 ounces silver per ton, with a quartz gangue-matter; developed by a shaft thirty feet in depth.

**Gregory.**—(See United Gregory Gold Mining Company.)

**Gregory and Gregory No. 2 Tunnel.**—Samuel Y. Smith, Denver, and James Fraser and John Reilley, both Central City, Colo., owners;

claims cover 3,000 lineal feet; situated in Bobtail Gulch, Gregory Mining district; located in 1879; on the Tunnel site a tunnel has been driven 500 feet long, cutting a number of well defined fissure veins, varying in width from three to six feet, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to six ounces gold per cord, and the smelting-ore about $35 per ton; on which veins fifteen locations have been made, prominent among which are the Morning Star, Evening Star, Mollie Stark, and Mollie Stark Extension.

**Griffin.**—Sidney W. Tyler and John Griffin, both Central City, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, two miles from Central City; located in 1862, and patented in 1881; vein a fissure, with a crevice from two to five feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock assaying $15 per ton in gold, and the smelting-ore about $100; developed by one seventy-five-foot shaft.

**Grizzly.**—Ezra T. Carr, Russell Gulch, owner; claim 1600x50 feet; situated in Davenport Gulch, Russell Mining district, two miles from Central City; located in 1864, and patented in 1872; vein a fissure two feet wide, pay streak fourteen inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, nine ounces gold per cord, and the smelting-ore yielding $100 per ton; developed by a shaft 250 feet in depth and 500 feet of levels; output for 1880-1-2, $5,000.

**Guennalla.**—Owned by P. R. Smith and W. D. Johnson, both Denver, James Collins, Central City, Colo., and Richard Humphrey, Black Hawk Colo.; claim 1500x150 feet; situated in Virginia Mining district, near Central City; vein a fissure, with a crevice averaging two feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore about $30 per ton; developed by a shaft sixty feet in depth and 200 feet of levels; output $1,200.

**Gulnare.**—L. G. Dunnavan and S. W. Brereton, both Central City, Colo., owners; claim 1500x150 feet; situated in Chase Gulch, Quartz Valley Mining district, three-fourths of a mile from Central City; located in 1859, and patented in 1880; vein a fissure, with a crevice six feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore about $35 per ton; developed by three shafts, twenty-five, thirty-eight, and forty feet in depth, and one forty-foot tunnel.

**Gunnell Consolidated Mines.**—Comprising the Main Gunnell, Gunnell No. 2, Wheeler, Marine, and Hattie, covering 7,055 linear feet; Job V. Kimber, Denver, Colo., Wm. Fullerton, R. W. Mosley, John B. Ballard, Edward F. Clinton, and Joseph Mayland, all Central City, Colo., owners; claims situated on Gunnell Hill, Eureka Mining district, at Central City, and all patented; veins all fissures, with crevices from two to six feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to ten ounces gold per cord, and the smelting-ore about $35 per ton; developed by a number of shafts from 700 to 900 feet in depth, with considerable drifting; aggregate output since 1874 $1,270,735.47, and during 1882 $110,681.90.

**Hard Money Group.**—Comprising the Hard Money, Hard Money No. 2, English, and America; Bradford H. Locke, Josephine H. Locke, both Central City, Colo., and William Fullerton, Black Hawk, Colo., owners; claims 1500x150 feet; situated at Hughesville, Hawkeye Mining district, two miles from Central City; located in 1878, and patented in 1879; veins all fissures, with pay streaks from one to two feet wide, containing argentiferous galena in a quartz gangue, which mill-run, when sorted, $200 per ton, net; developed by one main shaft 200 feet in depth, six other shafts from fifty to seventy-five feet in depth, and 400 feet of drifts on the Hard Money; worked by a fifteen-horse-power engine; output $50,000; property is leased until June, 1884, to Jos. Stanley, Wm. Fullerton, and Otto Sauer, Central City and Black Hawk.



**Hardesty.**—Hardesty Bros., Elmdale, Kansas, owners; Hyndman Mining Company (unincorporated), Central City, Colo., lessees; claim 150x50 feet; situated on Quartz Hill, Nevada Mining district, one mile from Central City; located in 1860, and patented in 1869; vein a fissure, with a crevice three feet wide, and a pay streak six inches, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to nine ounces gold per cord, and the smelting-ore yielding from $30 to $125 per ton; developed by a shaft 300 feet in depth and 400 feet of levels; property is worked through the La Cross shaft, and while in the hands of the lessees has had an output of 100 tons.

**Harlem.**—Oscar Vennetisch and Patrick Hickey, both Central City, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, one mile from Central City, and patented in 1881; vein a fissure, with a crevice from two to five feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the milling-ore yielding about $35 per ton; developed by one seventy-foot shaft and 100 feet of levels.

**Hartford.**—Harley B. Morse, Central City, Colo., and others, owners; claim 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, one-fourth mile from Central City; located in 1876, and in process of patent; vein a fissure, with a crevice from four to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to four ounces gold per cord, and the smelting-ore about $35 per ton; developed by one 260-foot shaft and 200 feet of drifts; output $2,000.

**Harvest Queen.**—(See Legal Tender Gold and Silver Mining Company.)

**Haseltine Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Daniel Donavan; vice-president, Albert J. Engle; secretary, Joseph B. Wilson; treasurer, Elton B. Gifford—all Philadelphia; superintendent and general manager, John B. Mellor, Central City, Colo.; office 209 South Third street, Philadelphia, Pa., and Central City, Colo.; owns the Haseltine, Haseltine East, Haseltine West, Quandary, and Howard, 1500x150 feet each, situated in Willis Gulch; and Fry, 1500x115 feet; situated in Elk Horn Gulch—all Russell Mining district, and patented in 1867; the Church Placer, 100 acres, patented in 1881; in the lode claims the veins are all fissures, from two to six feet wide, containing gold-bearing quartz and iron and copper pyrites, with some argentiferous galena, the stamp-rock milling, when sorted, from two to ten ounces gold per cord; and the smelting-ore yielding $87 per ton; Haseltine developed by a 320-foot shaft, three drifts aggregating 300 feet, and one adit 562½ feet long, Fry by two shafts sixty feet deep each, and the others operated through the Haseltine shaft; property worked by two forty-horse-power engines; also owns a concentration-works adjoining the mines, building 46x26 feet, containing three Jigs, one Slime-table, and one Rettinger Table, motive power for the same being supplied by a twenty-five horse-power engine; capacity for treating thirty tons of ore in twenty-four hours.

**Hawkeye.**—John E. Morris, Central City, and William Spence, Brooklyn, N. Y., owners; claim 1500x150 feet; situated on Mammoth Hill,

Gregory Mining district; located in 1863; vein a fissure three and one-half feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, six ounces gold per cord, and the smelting-ore about $35 per ton; developed by three shafts, eighteen, twenty-two, and sixty-four feet in depth.

**Helmer-Martin.**—(See Anchor Milling and Mining Company.)

**Hidden Treasure.**—(See California Gold Mine Company.)

**Hidden Treasure and Fanny.**—Elisha Stephens, Thomas Hampton, and Thomas Hambley, all Central City, Colo., owners; claims 1500 x150 feet each; situated on Silver Hill, Enterprise Mining district, one and three-fourths miles from Central City; located in 1878; veins both fissures, with crevices about one foot in width, containing galena in a quartz gangue; developed by a shaft sixty feet in depth.

**Hidden Treasure Mill.**—Owned by the California Gold Mine Company; main building 100x80 feet; situated on Clear Creek, three miles from Central City, containing fifty Stamps, motive power for the same being supplied by a fifty-foot overshot water-wheel; capacity fifty tons per day (twenty-four hours).

**Hit or Miss.**—James Powell, Black Hawk, owner; claim 1500x150 feet; situated in Lake Gulch, Lake Mining district; located in 1879; vein a fissure, with a pay streak eighteen inches wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two ounces gold per cord, and the smelting-ore yielding $80 per ton, net; developed by a tunnel twenty feet in length, and three shafts, ten, twenty-seven, and forty feet in depth.

**Homer.**—Andrew Bitzenhofer and M. Altvater, both Central City, Colo., Henry Shaffnit, Denver, Colo., Harrison Blizzard and Wm. Stevens, both Golden, Colo., owners; claim 1500x150 feet; situated on Mammoth Hill, Central City Mining district; located in 1873, and patented in 1876; vein a fissure, with a crevice four feet in width, and a pay streak from four inches to two feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to thirteen ounces gold per cord, and smelting-ore yielding about $35 per ton; developed by a shaft 130 feet deep and some drifting; output $1,500.

**Homes-take.**—(See Pizzaro Gold and Silver Mining Company.)

**Hubert.**—Matthew Balsinger, Nevadaville, B. H. Kock and others, owners; claim 1000x150 feet; situated on Gunnell Hill, Nevada Mining district, one mile from Central City, Colo., and patented in 1878; vein a fissure, with a crevice three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to three ounces gold per cord, and the smelting-ore yielding $25 per ton; developed by a shaft 385 feet deep and 130 feet of levels; property is worked by a twenty-horse-power engine.

**Humboldt.**—Frederick Kruse, Central City, Colo., owner; claim 1500x 150 feet; situated on Winnebago Hill, at Central City, and patented in 1881; vein a fissure, with a crevice from two to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-material yielding $25 per ton; developed by a shaft 100 feet deep.



**Humphries' Mill.**—H. Humphries, Jr., Idaho Springs, owner; office Black Hawk; stamp and concentration works situated on Clear Creek; established in 1877; building 100x75 feet (frame), containing twenty-five Stamps, with capacity to treat from forty to fifty tons in twenty-four hours, four double Jigs, four Cornish Buttles, three sets of Cornish Rolls, one large Blake Crusher, with capacity to concentrate from forty to fifty tons in twenty-four hours; motive power for the same being supplied by a sixty-horse-power engine, with ample boiler.

**I. X. L.**—(See Western Reserve Gold and Silver Mining Company.)

**Illinois and Colorado Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; general manager, Paschal R. Smith, Denver, Colo.; superintendent, James Collins, Central City; office Windsor Hotel Building, Denver, Colo.; owns the Kingston and Lillian lodes, 1500x150 feet each; situated in Russell Gulch, Russell Mining district, one mile from Central City, and patented; veins both fissures, with crevices two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to four ounces gold per cord, and the smelting-ore yielding about $30 per ton; the former developed by one shaft 175 feet deep and 250 feet of levels, and the latter by a shaft 200 feet deep and 150 feet of levels.

**Independence Group.**—Consisting of four claims; situated on Saratoga Mountain, Russell district; for the development of which a tunnel is being run, designed to cut the veins at considerable depth; veins all fissures, varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), and promising fairly.

**India Group.**—Five claims, viz., India, Black Horse, White Rose, and two others; Samuel Y. Smith, Denver, Colo., and John J. Reilley, Central City, Colo., owners; claims 1500x150 feet each; situated in Lake Gulch, Lake Gulch Mining district, two miles from Central City; veins all fissures, about five feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore yielding about $25 per ton; developed by one thirty-foot shaft.

**Indiana Group.**—Comprising the Indiana, Express, Sun, and Moon lodes; Harley B. Morse, Central City, Colo., owner; claims 1500x150 feet, with the exception of the Indiana 1300x150 feet, and situated on the west slope of Quartz Hill, Nevada Mining district, one and one-fourth miles from Central City, Colo.; Indiana located 1859, and others in 1874 and 1876; veins all fissures, with crevices averaging three feet in width, and pay streaks from one and one-half to two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three and one-half ounces gold per cord, and the smelting-ore about $25 per ton; Indiana developed by a shaft 260 feet deep and 100 feet of levels, Express by a thirty-foot shaft, Sun by shafts from ten to thirty feet in depth, and Moon by shafts from ten to forty feet; output 5,000 tons.

**Iowa.**—L. Schaffnit, Peter French, G. Leidinger, and John Lutz, all Central City, owners; claim 1500x150 feet; situated on Negro Hill, one-half mile from Central City, Central City Mining district; located October 30, 1880; vein a fissure about two feet wide, containing gold-bearing quartz and iron and copper pyrites, with some argentiferous galena; developed by a shaft sixty-three feet deep.

**Iron Cross and Petersburgh.**—Peter and C. F. Peterson, owners; claims 1500x150 feet each; situated in Ellsworth Gulch; veins both fissures,

with crevices four feet in width, containing galena and sulphurets in a quartz gangue, milling, when sorted, from $100 to $1,000 per ton; Iron Cross developed by one main shaft ninety feet in depth and seventy feet of levels; Petersburgh by a shaft fifty-five feet in depth.

**Irona.**—(See Legal Tender Gold and Silver Mining Company.)

**Irving.**—Owned by Harley B. Morse, Central City; claim 250x50 feet; situated on the Nevada Flats, Nevada district, one mile from Central City; located in 1865, and patented in 1872; vein a fissure, about three feet wide, containing gold-bearing quartz and iron and copper pyrites, with some galena, the stamp-rock milling, when sorted, from two and one-half to four ounces gold per cord, and the smelting-ore from $20 to $70 per ton; developed by one sixty-five-foot shaft.

**Ivanhoe.**—Thos. H. Potter and John Sparks, both Central City, owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, near Nevadaville; patented in 1877; vein a fissure, with a crevice from three to five feet in width, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to six ounces gold per cord, and the smelting-ore about $25 per ton; developed by a tunnel 600 feet long, with some drifting.

**James Henry.**—Sidney W. Tyler, Central City, Colo., and Henry Bolthorf, Denver, Colo., owners; claim 1400x150 feet; situated on Gunnell Hill, Eureka Mining district, one-fourth mile from Central City, and patented n 1870; vein a fissure, with a crevice from one and one-half to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore about $25 per ton; developed by one 200-foot shaft and 400 feet of drifts; output $10,000.

**Jenny Lind Group.**—(See Clear Creek County.)

**Joe Marshall.**—Edward W. Henderson, S. L. Alexander, and W. A. Warner, all Central City, Colo., and Jos. M. Marshall, Denver, Colo., owners; claim 1500x150 feet; situated on Rough-and-Ready Hill, Fairfield Mining district; located in 1879; vein a fissure, with a crevice four feet wide, containing gray copper and galena, assaying 250 ounces silver per ton, with a quartz gangue; developed by a shaft sixty feet in depth.

**Joe Reynolds.**—(See Gould Silver Mining Company.)

**Jones.**—John Sparks, A. W. Tucker, and C. Hale, all Nevadaville, Colo., owners; claim 1100x150 feet; situated on Gunnell Hill, Nevada Mining district; located in 1860, and patented in 1882; vein a fissure, with a crevice from two to three feet in width, and a pay streak one foot wide,containing gold-bearing quartz and iron pyrites, with some argentiferous galena, the stamp-rock milling, when sorted, eight ounces gold per cord, and the smelting-ore yielding about $25 per ton; developed by one sixty-foot shaft.

**Jones.**—600x150 feet; owners: A. G. Derby 300x150feet, J. F. Phillips 100x150 feet, and Daniel McGonigal 200x150 feet; lessee, W. W. Richards, Nevadaville, whose term expires October 10, 1883; claim situated on Gunnell Hill, Nevada Mining district, at Nevadaville; located in 1859, and patented in 1878; vein a fissure, pay streak twelve inches wide, containing gold-bearing quartz and iron and copper pyrites, the stamping-ore milling, when sorted, from seven to eight ounces gold per cord, and the smelting-material from $15 to $37 per ton; developed by a shaft 550 feet deep and 1,000 feet of drifts, with some stoping; property worked by a fifteen-horse-power engine; output from eight to ten cords per month.



**Joslyn Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, Don C. Joslyn; vice-president, Wm. H. Bryan; secretary and treasurer, J. W. Finney; office Room 15 *Times* Building, Chicago, Ill.; superintendent, Thos. Swartwout, Black Hawk, Colo.; owns the Mountain City and "150" lodes, 1500x150 feet each; situated on German Mountain, Gregory Mining district, at Central City, the Mountain City patented; veins both fissures, from two and one-half to six feet in width, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from four to eight ounces gold per cord,and the smelting-ore $80 per ton,net; Mountain City developed by one main shaft 200 feet in depth and 600 feet of levels and drifts; "150" by a shaft fifty feet in depth, showing galena; the Centennial Tunnel cuts these veins 200 feet in depth; output, from Mountain City, $50,000.

**Juno.**—William E. O'Hea, Black Hawk, owner; claim 1500x150 feet; situated on Silver Mountain, Enterprise Mining district, three miles from Central City; located in 1880; vein a fissure three feet wide, pay streak five inches, containing galena and zinc blende in a quartz gangue, which mill-runs, when sorted, forty-five ounces silver per ton; developed by an adit on the vein ninety feet in length.

**Justice.**—Wm. M. Roworth, Central City, Colo., owner; claim 1150x150 feet; situated in Lake Gulch, Lake Mining district; located in 1859, and patented in 1879; vein a fissure about three feet wide, containing gold bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to five ounces gold per cord,and the smelting-ore about $25 per ton; developed by one shaft 130 feet deep.

**Kansas.**—(See Denver Gold Company.)

**Kent County.**—Reuben Rickard, Berkley, California, Thomas Rickard, London, Eng., and others, owners; offices 58 Lombard street, London, Eng., and Idaho Springs, Colo.; claim covers 4,500 linear feet on one vein, by fifty feet in width; situated on the west slope of Quartz Hill, Nevada Mining district, one mile from Central City, and patented; vein a fissure, with a crevice six feet in width,and a pay streak from two to four feet,containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four and one-half ounces gold per cord, and the smelting-material yielding $177 net per ton; developed by one shaft 865 feet deep and 3,000 feet of levels, with considerable stoping; improvements—one fifty-horse-power engine for hoisting and pumping, with shaft and ore houses; output 600 tons per month.

**Keystone.**—Curtis P. and J. S. Updegraff, both Central City, owners; claim 150x1500 feet; situated on Negro Hill, one mile from Central City, Quartz Valley Mining district; relocated in 1880; vein a fissure five feet wide, pay streak from three to four feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two and one-half ounces gold per ton, and the smelting-ore yielding about $25 per ton; developed by 300 feet of shafts; output $40,000.

**Kimber and Fullerton Mills.**—Owners Joseph Kimber, Denver, and Wm. Fullerton, Black Hawk; upper mill situated on Clear Creek, near Black Hawk; building (stone) 80x40 feet; containing thirty-three Stamps, with a capacity to treat thirty tons in twenty-four hours, motive power for the same being supplied by a twenty-horse-power engine; lower mill established in 1859, and also situated on Clear Creek; foreman, John Key, Black Hawk; building (iron) 80x50 feet; containing forty Stamps, motive power for the same being supplied by a forty-horse-power engine; capacity forty tons in twenty-four hours.

**King of the Ranch Group.**—Comprising the King of the Ranch, 1000x150 feet; Hercules, 100x150 feet; and Silver Plate, 1500x150 feet; A. R. Thompson, Nevadaville, Colo., owner; claims situated in Eureka Gulch, Eureka Mining district, one mile from Nevadaville; located in 1879 and 1880; veins all fissures, with crevices from two to six feet in width, containing native silver in the form of wire, and sulphurets, in a quartz gangue, which mill-run, when sorted, 250 ounces silver per ton; King of the Ranch developed by a shaft fifty-five feet in depth, Hercules by a shaft thirty feet in depth, and Silver Plate by an open cut 300 feet in length; output from $8,000 to $10,000.

**Kinsley.**—John Key, Chris. Gray, John Wheeler, and John Tomlinson, all Black Hawk, Colo., owners; claim 1500x150 feet; situated on Clear Creek, Enterprise Mining district; located in 1875; vein a fissure, with a crevice from one to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two and one-fourth ounces gold per cord, and the smelting-ore about $25 per ton; developed by one eighty-five-foot shaft.

**Kip.**—First National Bank, Denver, Colo., and Rocky Mountain National Bank, Central City, Colo., owners; claim 1200x50 feet; situated on Mammoth Hill, Gregory Mining district, at Central City; located in 1862; vein a fissure, with a crevice six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore yielding $100 per ton; developed by two shafts 275 and 300 feet in depth, and 1,200 feet of levels, with some stoping.

**Kitty.**—Harley B. Morse, Central City, Colo., and Daniel G. Copeland, Boston, Mass., owners; claim 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, one-fourth mile from Central City; located in 1879, and patented in 1882; vein a fissure, with a crevice two feet in width, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from three to four ounces gold per cord, and the smelting-ore about $20 per ton; developed by a seventy-two-foot shaft and some drifting; output $1,000.

**Klein's German.**—John F. and George J. Klein and W. Koenig, all Central City, Colo., owners; claim 1500x50 feet; situated on German Hill, Central City Mining district, one-fourth mile from Central City; located in 1859, and patented in 1872; vein a fissure, with a crevice from two and one-half to seven feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling four ounces gold per cord, and the smelting-ore yielding from $50 to $200 per ton; developed by two shafts 235 and 330 feet in depth and a level 250 feet long; property worked by a fifteen-horse-power engine.

**Kreigbaum.**—John Gray, James Burrell, and Edward W. Henderson, all Central City, Colo., owners; claim 1200x150 feet; situated on Gunnell Hill, Eureka Mining district, one-half mile from Central City; located in 1859, and in process of patent; vein a fissure, with a crevice from one to three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one to fifteen ounces gold per cord, and the smelting-ore about $25 per ton; developed by a 200-foot shaft and 200 feet of levels; output about 800 tons.

**La Cross Gold Mining Company (The).**—Incorporated under the laws of New York; office 59 William street, New York City; owns the La Cross lode, 600x150 feet; situated on Burrough's vein, and on Quartz Hill, Nevada Mining district; located in 1860, and patented in 1881; vein a fissure, with a pay streak seven inches wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces



gold per cord, and the smelting-ore yielding from $20 to $100 per ton; developed by a shaft 800 feet deep and 2,000 feet of drifts, with some stoping; property leased to C. Lugg, Geo. E. Randolph, John Manville, Mark Hyndman, and A. Bilzenhofer, all Central City, who are making regular shipments.

**Lake.**—Richard Mackey, Nevadaville, Colo., owner; claim 1500x150 feet; situated on Mt. Pisga, Lincoln Mining district, three miles from Central City; located 1879; vein a fissure three feet wide, containing a silver-bearing ore, assaying $100 per ton, with a quartz gangue; developed by one forty-foot shaft.

**Lake and Lakeside.**—Two adjoining claims on the same vein, 4500x150 and 1500x150 feet, respectively; situated on Clear Creek, Virginia district, and patented; owners Hal. Sayr, Thos. H. Potter, and —— Rowe, all Central City; vein a fissure, with a crevice from one to four feet wide, containing gold-bearing quartz and argentiferous galena, the stamp-rock milling, when sorted, from two to five ounces gold per cord, and the smelting-ore probably $20 per ton.

**Lamberson and Warren.**—Harley B. Morse, Central City, Colo., owner; claim 1600x50 feet; situated on Nevada Flats, Nevada Mining district, one mile from Central City, Colo.; located in 1865, and patented in 1872; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz, and iron and copper ryrites, with some galena and zinc blende, the stamp-rock milling, when sorted, from two and one-half to four ounces gold per cord, and the smelting-ore yielding from $20 to $70 per ton; developed by seven shafts from twenty to sixty feet in depth and 100 feet of drifts; output 400 tons.

**Last Chance.**—James Downey, Robert Malloy, James Mackey, and Robert Fallon, all Nevadaville, Colo., owners; claim 1200x150 feet; situated on Alps Hill, Illinois Central Mining district, two miles from Central City; located in 1862; vein a fissure, with a crevice from eighteen inches to two feet wide containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one and one-half to eight ounces gold per cord, and the smelting-ore yielding $30 per ton; developed by two shafts 100 and 125 feet in depth.

**Last Chance.**—James Mackey, Matthew O'Brien, James Downey, and Robert Malloy, all Nevadaville, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, at Nevadaville; located in 1879; vein a fissure, with a crevice two and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, six ounces gold per ton, and the smelting-ore about $20 per ton; developed by a shaft 150 feet deep and fifty feet of drifts.

**Leavenworth.**—(See Wyandotte Consolidated Gold and Silver Mining Company.)

**Legal Tender Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; vice-president, Thomas Manning, New York City; superintendent, Charles L. Harker, Central City, Colo.; office Central City, Colo.; owns the Legal Tender, Irona, Harvest Queen, and one third of the Agra lode; situated in Davenport Gulch, Russell Mining district, and in process of patent; veins all fissures, with crevices from one to five feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to seven ounces gold per cord, and

the smelting-material yielding from $15 to $45 per ton; developed by a number of shafts from forty to seventy-five feet in depth; output from the Harvest Queen about $1,500.

**Little Bobtail Gold and Silver Mining Company (The).**—Owns the Little Bobtail, Salt Lake, Dovetail, Little Chance, Mary, Flint, Railroad, Baltic, Juanita, and Marion, 1500x150 feet each; situated on Bobtail Hill, near the Chemung, of which the Baltic is an extension; veins all fissures varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; developments—on the Baltic one sixty-foot shaft, showing a sixteen-inch pay streak, on the Railroad two shafts 230 and 60 feet in depth, on the Flint a shaft 130 feet deep, with some levels, showing ten inches of vein-matter, and the others to a less extent, but principally by shafts.

**Little Harvey.**—L. Marx, A. H. Day, and John Kraeger, all Central City, owners; claim 1500x150 feet; situated on Bobtail Hill, Gregory Mining district, three-fourths mile from Black Hawk; located in 1880, and patented in 1882; vein a fissure, with a pay streak eighteen inches wide, containing gold-bearing quartz and iron pyrites, the stamp-rock yielding by assay test from eight to twenty-seven ounces gold per cord, and the smelting-ore about $30 per ton; developed by one seventy-five-foot shaft.

**Lucerne.**—(See Gold Coin Mining and Milling Company.)

**Lucerne Mining Company (The).**—Incorporated under the laws of New York; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; secretary and treasurer, Chas. F. Roper, New York City; agent, Bradford H. Locke, Central City, Colo.; offices 29 Rose street, New York, and Central City, Colo.; owns the Schiller lode, 1600x50 feet; situated on Mammoth Hill, Gregory Mining district, one-fourth mile from Central City; located in 1860, and patented in 1874; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz (stamp-rock) and iron pyrites (smelting-ore); developed by one forty-foot shaft; and the Colfax, 1600x50 feet; situated in Elk Horn Gulch, Pleasant Valley Mining district, three miles from Central City; located in 1860; vein a fissure, with a crevice three feet in width, containing galena, which assays fifty ounces silver per ton, in a quartz gangue; developed by a shaft 100 feet in depth.

**Lynn.**—E. A. Lynn and Sidney W. Tyler, both Central City, Colo., owners; claim 1500x150 feet; situated in Mountain House Mining district, four miles from Central City; located in 1880; vein a fissure, with a crevice from four inches to six feet wide, and a pay streak from two to eighteen inches, containing galena in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by three shafts from forty to sixty feet in depth.

**McAdams.**—(See Mammoth Group.)

**McKay-Leavenworth.**—D. J. McKay, John Madden, John B. McKay, and John Henderson, all Central City, Colo., lessees; claim situated on Leavenworth Mountain, Russell Mining district, three miles from Central City; vein a fissure, with a crevice from two to five feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, two and one-half ounces gold per cord, and the smelting-ore $75 per ton; developed by a shaft 505 feet deep and 360 feet of drifts, with some stoping.

**Mack.**—John Tierney, Wm. Burk, and Wm. Kelly, all Central City, Colo., owners; claim 1200x150 feet; situated on Bates Hill, Gregory Mining district, at Central City; located in 1869; vein a fissure, with a crevice from two and one-half to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to sixteen ounces gold per cord, and the smelting-ore about $50 per ton; developed by one 200-foot shaft, 600 feet of drifts, and one open cut 600 feet long.



**Mackey.**—(On the Burroughs vein); Richard and James Mackey, James Downey, Matthew O'Brien, and Robert Fallon, all Nevadaville, lessees; claim 1250x150 feet; situated on Quartz Hill, Nevada Mining district, one mile from Central City; located in 1862, and patented in 1880; vein a fissure, with a pay streak from two inches to four feet wide, containing gold-bearing quartz and iron and copper pyrites, with argentiferous galena, the stamp-rock milling, when sorted, from one and one-half to ten ounces gold per cord, and the smelting-ore yielding from $40 to $150 per ton; developed by a shaft 700 feet deep and 2,000 feet of levels, with some stoping; improvements—one sixteen-horse-power engine, with the necessary buildings; monthly output thirty-five cords.

**Maggie Gold and Silver Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in July, 1880; capital stock $200,000, in 2,000 shares of $10 each, non-assessable; principals, Henry E. Bowers and Samuel P. Blodgen, New York, and Paschal R. Smith, Denver, Colo.; superintendent, James Collins, Central City, Colo.; office Windsor Hotel Building, Denver, Colo.; owns the Maggie lode, 1500x150 feet; situated in Bay State Mining district, near Central City, and patented; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites with argentiferous galena (smelting-ore); developed by two tunnels on the vein 100 and 200 feet in length.

**Mamie.**—Frederick E. Lucas, Central City, Colo., owner; claim 1500x150 feet; situated near Mt. Pisga, Eureka Mining district, two and one-half miles from Central City; located in 1882; vein a fissure, with a crevice three feet wide, and a pay streak twelve inches, containing galena, assaying from 40 to 100 ounces silver per ton, with a quartz gangue; developed by two shafts thirty and forty-five feet in depth.

**Mammoth Group.**—Comprising the Mammoth, Mammoth Side, McAdams, and Waterbury lodes; Henry B. Morse, Central City, Colo., owner; Mammoth 1283x50 feet, Mammoth Side 1300x150 feet, McAdams 1500x100 feet, Waterbury 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, one-fourth mile from Central City; located in 1859, and patented in 1870; veins all fissures, with crevices from two and one-half to four feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to ten ounces gold per cord, and the smelting-ore from $15 to $45 per ton; Mammoth developed by a shaft 160 feet deep and twenty other shafts from twenty to sixty feet in depth, McAdams by 500 feet of drifts, and Waterbury by a tunnel 100 feet long; output $75,000.

**Mammoth West.**—Harley B. Morse and A. W. Magruder, both Central City, Colo., owners; claim 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, one-fourth mile from Central City; located in 1859, and patented in 1876; vein a fissure, with a crevice five feet wide, containing gold-bearing quartz, milling, when sorted, from two to six ounces gold per cord, and some silver; developed by two shafts 100 feet deep each and four other shafts from twenty to sixty feet in depth; output $10,000.

**Manitoba and Manitoba No. 2.**—Wm. J. Lewis, John Helmick, and Wm. B. Sherrick, all Nevadaville, owners; claims cover 3000x150 feet;

situated in Peck Gulch, five miles from Central City, Vermilion Mining district; located in 1880; vein a fissure five feet wide, containing galena in a quartz gangue, which mill-runs, when sorted, from 40 to 200 ounces silver per ton; developments—one shaft 120 feet deep and 100 feet of drifting; improvements—one sixty-horse-power double-hoisting engine, with ore and shaft houses.

**Maple-leaf Group.**—Comprising the Maple-leaf, Ranchman, Little Harvey, Gertrude Thompson, Giant-and-Muscle, Wm. K. Steele, and Pick-and-Shovel lodes, 1500x150 feet each; Harvey M. Thompson, Central City, Colo., owner; claims situated at Camp Clifford, on Clifford Mountain, partly in Lincoln Mining district and partly in York Mining district, Clear Creek County, three miles from Central City, Colo.; located in 1879, 1881, and 1882, and Maple-leaf patented March 28, 1882; veins all fissures, with a crevice in the Maple-leaf four feet wide, and several pay streaks from one-half to ten inches, containing gray copper, galena, brittle and ruby silver, sulphurets, and some silver glance, in a quartz gangue, milling, when sorted, an average of 450 ounces silver, and assaying as high as $15,000 per ton; while in the other claims the mineral is similar, but not so high in grade; developments are principally on the Maple-leaf, through the workings of which all the property can be operated, and consist of one incline shaft 200 feet deep, with four levels running therefrom at depths of 40, 60, 90, and 100 feet, and aggregating 300 feet in length, and a sixty-foot air-shaft; improvements—one Lidgerwood Hoister and one twenty-five-horse-power engine, with complete skip arrangements and reversible-link motion, and other machinery, ore and shaft-houses, assay-office, blacksmith-shop, etc.

**Mary Ann.**—James Strike, Wm. Oggerdy, and R. B. Waters, all Central City, Colo., and Henry Osborn, Leadville, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Nevada Mining district, one half mile from Central City; located in 1878; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one and one-half to two and one-half ounces gold per cord, and the smelting-ore about $50 per ton; developed by one fifty-foot shaft.

**Mary Graham.**—Sidney W. Tyler and E. A. Lynn, both Central City, and T. M. Patterson, Denver, Colo., owners; claim 1500x150 feet; situated in Enterprise Mining district, one mile from Black Hawk; located in 1879; vein a fissure, with a crevice from two to four feet in width, and a pay streak from two to twelve inches, containing galena in a quartz gangue, milling, when sorted, thirty per cent lead and forty ounces silver per ton; developed by a shaft 100 feet in depth and sixty feet of levels; output $4,000.

**Mascotte Group.**—Comprising the Mascotte, Ridge, and Jumbo lodes; George W. Ellery, L. G. Dunnavan, and Alonzo Furnald, all Central City, Colo., owners; claims 1500x150 feet each; situated at Black Hawk, Empire district; located in 1882; veins all fissures, with crevices seven feet wide, and pay streak, from four to thirty inches, containing sulphurets of silver in a quartz gangue, milling, when sorted, from 50 to 900 ounces silver per ton; developed by tunnels thirty-five and sixty-five feet long and some drifting; output twenty-five tons, and it is estimated that there is over $10,000 in sight.

**Mascotte No. 2. Group.**—Comprising the Mascotte No. 2, Business, and Artie lodes, three adjoining claims on the Mascotte vein; David S. Green, Central City, Colo., owner; claims 1500x150 feet each; situated one mile from Black Hawk, Empire Mining district; located in 1882; vein a fissure, with a crevice from ten to twenty feet in width, containing quartz seamed with galena and sulphurets in a quartz gangue, assaying from 100 to 500 ounces silver per ton; developed by 100 feet of drifts and adits.



**Mendota.**—William Hannah and others, Central City, Colo., owners; claim 1500x150 feet; situated in Virginia Cañon, Virginia Mining district, three miles from Central City; located in 1876; vein a fissure, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, from four to eight ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one seventy-five-foot shaft and some drifting; output $4,000.

**Mercer Gold Mining Company.**—(New York); owns the Missouri, 500x50 feet; situated on Quartz Hill, about one-half mile from Central City, and patented; vein a fissure three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to eight ounces gold per cord, and the smelting-ore from $50 to $75 per ton; developed by two 200-foot shafts and over 300 feet of drifting; and the Mercer County, 500x50 feet; situated on Quartz Hill, about one mile from Central City; vein a fissure four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one to six ounces gold per cord, and the smelting-ore from $25 to $75 per ton; developed by one 200-foot shaft and about 175 feet of drifts.

**Michigan Central.**—(See Silver Cloud and Michigan Central.)

**Midos Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in June, 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; principals, Wm. T. Kendrick, James G. Drew, Samuel Y. Smith, and Paschal R. Smith, all Denver, Colo.; superintendent, James Collins; office Windsor Hotel Building, Denver, Colo.; owns the Dallas, Eida, Onan, Yellow-jacket, Mammoth, Silver Mountain, Bonanza, Little Chief, Big Chief, U. S. Grant, R. E. Lee, Cyclone, and Summit lodes, 1500x150 feet each, except Dallas, 650x150 feet, and patented; situated at Black Hawk, Gregory Mining district; veins all fissures, with crevices from two to ten feet in width, containing gold-bearing quartz and galena, the stamp-rock milling, when sorted, from one to four ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one main tunnel 500 feet long, cutting some of the veins at a considerable depth, on which there is some drifting; also owns a stamp-mill situated near the mouth of the tunnel, containing forty Stamps, with the necessary motive power.

**Minnesota.**—John E. Morris, Central City, owner; claim 1500x150 feet; situated at Central City, Central City Mining district; located in 1874, and patented in November, 1882; vein a fissure five feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to seven ounces gold per cord, and the smelting-ore from $15 to $40 per ton; developed by two shafts 35 and 120 feet in depth.

**Minnie.**—Sidney W. Tyler, Central City, Colo., A. D. Baker, Newport, R. I., and E. W. Tyler, New York City, owners; claim 1500x150 feet; situated on Gregory Hill, Gregory Mining district, one-half mile from Central City; located in 1876, and patented in 1877; vein a fissure, from one to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, seven ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one shaft 150 feet deep and some drifting; output $10,000.

**Missouri.**—(See Mercer Gold Mining Company.)

**Monument.**—George H. Gray, Sidney W. Tyler, A. M. Jones, and E. A. Lynn, all Central City, owners; claim 1500x150 feet; situated on Eureka Gulch, Eureka Mining district, one mile from Central City; located in 1880; vein a

fissure, with a crevice ten feet in width, and a pay streak twenty-eight inches, containing gold-bearing quartz and iron pyrites with galena, the stamp-rock milling, when sorted, from one and one-half to two and one-half ounces gold per cord, and the smelting-ore from $10 to $50 per ton; developed by one fifty-foot shaft.

**Morell.**—Ezra T. Carr, Russell Gulch, J. J. Joslin, Denver, Colo., and N. C. Hyde, St. Albans, Vt., owners; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, two miles from Central City; located in 1880; vein a fissure from two and one-half to three feet wide, containing gold-bearing quartz and iron and copper pyrites; developed by a shaft 140 feet in depth.

**Morning Star.**—(See Gregory and Gregory No. 2.)

**Morning Star.**—J. S. Updegraff and John Best, both Central City, and R. L. Rohm, Red Cliff, owners; claim 1500x150 feet; situated in Russell Gulch, one and one-half miles from Central City, Russell Mining district; relocated in 1878, and patented in 1882; vein a fissure four feet wide, pay streak from six to twenty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from eight to seventeen ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one sixty-foot shaft.

**Mosell.**—Harley B. Morse and John F. and George J. Klein, all Central City, Colo., owners; claim 1500x150 feet; situated on Mammoth Hill, Gregory Mining district, one-half mile from Central City; located in 1872, and patented in 1881; vein a fissure, with a crevice two feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to six ounces gold per cord, and the smelting-ore yielding from $15 to $45 per ton; developed by four shafts from twenty to sixty feet in depth.

**Mountain City.**—(See Joslyn Mining Company.)

**Mullen Placer.**—M. H. Mullen, David Henderson, and S. Nichols, all Central City, Colo., owners; claim 5,000 feet in length, and is situated in Lake Gulch, Lake Mining district, one and one-half miles from Central City; the developments consisting of ditching and surface workings.

**Mackey Mill.**—Situated at Nevadaville, about two miles from Central City, containing thirty-seven stamps, with the necessary motive power; capacity thirty-seven tons per day (twenty-four hours).

**Mammoth and Mammoth No. 1.**—Two adjoining claims on the same vein; situated on Perigo Mountain, near the Perigo, about three miles from Rollinsville; vein a fissure, varying in width, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly.

**Naomi.**—(An extension of the Babe of the Woods); James E. Kane, Stephen Murdock, and A. H. Davis, all Central City, owners; claim 1500x150 feet; situated on Dorey Hill, two miles from Central City, Mountain House Mining district, Gilpin County; located in 1881; vein a fissure from five to seven feet in width, containing galena and carbonates, assaying from 75 to 100 ounces silver per ton, with a decomposed quartz gangue; developments—seventy-five feet of shafting.



**National.**—John Henderson, D. J. Mackey, and John D. Smock, all Central City, Colo., owners; claim 1500x150 feet; situated on Quartz Hill, Illinois Central Mining district; located in 1859, and relocated in 1876; vein a fissure, with a crevice four and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to five ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developments—one shaft 105 feet deep and 100 feet of levels; property is leased to David Henderson, Col. Peter French, Matthew Ballard, M. H. Mullen, Matthew Caldwell, and others, Central City, to January 1, 1885.

**Nemaha.**—Thomas W. Williams and Wm. Speer, both Black Hawk, Colo., owners; claim 550x150 feet; situated on Bobtail Hill, Gregory Mining district; located in 1880; vein a fissure, with a crevice from two and one-half to three and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock yielding, when sorted, six ounces gold per cord, and the smelting-ore from $75 to $150 per ton; developed by a shaft 150 feet in depth and 250 feet of drifting.

**Next President.**—(See First Venture Mining Company.)

**New Columbia Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, April 24, 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, Chas A. Gunnell, Boston, Mass.; general manager, Paschal R. Smith, Denver, Colo.; superintendent, James Collins, Central City, Colo.; owns the Castleton, Columbia, and President Hayes lodes, 1500x150 feet each; situated in the Virginia Mining district, partly in Clear Creek County, and patented; veins all fissures, with crevices from two to six feet wide, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, from one to ten ounces gold per cord, and the smelting-ore about $40 per ton; developed by three shafts, 180, 200, and 500 feet in depth, and 800 feet of levels, with some drifting.

**New West.**—Nicholas Paulus, G. T. Howson, and Christopher Klein, all Central City, owners; claim 1500x150 feet; situated on Nagle Hill, Quartz Valley Mining district, three and one-half miles from Central City; located in 1882; vein a fissure three feet wide, pay streak from two to six inches, containing galena, assaying from 50 to 500 ounces silver per ton, with a quartz gangue; developed by one forty-foot shaft.

**New York and Colorado Mining Company (The).**—Incorporated under the laws of New York, in 1882; capital stock $1,000,000, in 50,000 shares of $20 each, non-assessable; owns 800x50 and 500x50 feet, respectively, on the Gregory and Briggs veins; situated on Gregory Mountain, at Black Hawk, and patented; veins both fissures from four to eight feet wide, pay streak in the Gregory thirty inches and in the Briggs twelve inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, about three ounces gold per cord, and the smelting-ore from $50 to $100 per ton; developments consist mainly of shafts and levels, and are quite extensive.

Also owns a stamp-mill, built by Fraser & Chalmers, Chicago; situated at Black Hawk, containing forty Stamps, with the necessary motive power, but which is now idle.

**New York Mill Company (The).**—Incorporated under the laws of Colorado, August 27, 1879; capital stock $48,000, in 480 shares of $100 each, non-assessable; president, Samuel Mellor; secretary, treasurer, and manager, Frederick Kruse—both Central City, Colo.; owns stamp-mill, building

(stone) 100x80 feet, situated at Black Hawk, and containing seventy-five Stamps, with a capacity to treat seventy tons in twenty-four hours, motive power for the same being supplied by a seventy-five-horse-power engine, with ample boiler.

**Nil Desperandum.**—William E. O'Hea, Black Hawk, owner; claim 1500x150 feet; situated on Silver Mountain, Enterprise Mining district, three miles from Central City; located in 1881; vein a fissure six feet wide, pay streak eight inches, containing galena and zinc blende in a quartz gangue, milling, when sorted, three ounces gold and five ounces silver per ton; developed by an adit on the vein 130 feet in length.

**Nimrod.**—A. R. Thompson, Robert and A. Hapelwood, and Alfred and Alexander Aulesbrook, all Nevadaville, Colo., and H. J. Hawley, Central City, Colo., owners; claim 1200x150 feet; situated on west end of Quartz Hill, Russell Mining district, one mile from Central City; located in 1879; vein a fissure, with a crevice from four to eight feet wide, and a pay streak from six inches to five feet, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, from two and one-half to fifteen ounces gold per cord, and the smelting-ore from $25 to $80 per ton; developed by one 400-foot shaft, with some drifting; worked by a fifteen-horse-power engine.

**Non-antum Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; principals, C. C. Barton, S. P. Hubbard, T. L. Rogers, E. H. Mason, and B. Richmond Keith, all Boston, Mass.; general manager, Paschal R. Smith, Denver, Colo.; superintendent, James Collins, Central City, Colo.; office Windsor Hotel Building, Denver, Colo.; owns the British, Last Chance, Iron Rain, Charleston, Nebraska, Duke Swain, Congo, Grand Island, Old California, Joe Bates, Gold-pan, African, Star, Tropic, Lady Rogers, Boston, Telegraph, Chicago Boy, and Snow-flake, 1500x150 feet each; situated in Russell and Lake Gulches, Russell and Lake Mining districts, one mile from Central City, and the British patented; veins all fissures, from two to six feet in width, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling from one to three ounces gold per cord, and the smelting-ore from $15 to $40 per ton, when sorted; British developed by one shaft 175 feet deep and 200 feet of levels, and the others by one shaft each from 10 to 100 feet in depth.

**North.**—(Formerly Shaw, and probably an extension of the Mammoth); situated on the divide between Russell and Leavenworth Gulches, north of the Wyandotte property, and about one mile from Central City; located in 1861; vein a fissure from four to eight feet wide, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; developed by two shafts 100 and 75 feet in depth, with some drifting.

**North Fairfield.**—600x50 feet; situated at the head of Russell Gulch, about two miles from Central City; located in 1868; owners, the North Fairfield Mining Company; vein a fissure about three feet wide, pay streak from ten to twenty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from five to fifteen ounces gold per cord, and the smelting-ore from $50 to $100 per ton, when sorted; developed by one main shaft 140 feet feet deep, with some drifting.

**Nottaway.**—Patrick Meagher and Alexander McLeod, both Central City, Colo., owners; claim 900x150 feet; situated on Nottaway Hill, in Lake and Russell Mining districts, three-fourths mile from Central City, Colo.; located in 1860, and patented in 1881; vein a fissure, with a crevice three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to three ounces gold per cord, and the smelting-ore from $15 to $40 per ton; developed by a shaft 125 feet in depth; output $1,500.



**Ochre.**—James Mackey, Navadaville, and John Flood, Owen Riley, and James Peterson, all Gambler Gulch, owners; claim 1500x150 feet; situated in Gambler Gulch, Independent Mining district, three and one-fourth miles from Rollinsville, Colo.; located in May, 1882; vein a fissure, with a crevice three feet wide, and a pay streak twenty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by one twenty-five-foot shaft.

**Ohio.**—L. Schaffnit, J. Leidinger, Nicholas Paulus, and Frederick Trebert, all Central City, owners; claim 1500x150 feet; situated at Central City, Quartz Hill district; located January 21, 1880; vein a fissure two feet wide, pay streak from three to six inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one to three ounces gold per cord, and the smelting-ore $80 per ton, gross; developed by one sixty-six-foot shaft and fifty feet of drifts.

**Ohio.**—Thomas H. Potter and Harley B. Morse, both Central City, Colo., owners; claim 1500x150 feet; situated in Russell Gulch, Russell district, two miles from Central City; located in 1859, and patented in 1879; vein a fissure, with a crevice eighteen inches wide, and a pay streak eight inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from one to three ounces gold per cord, and the smelting-ore $80 gross per ton, when sorted; developed by one eighty-foot shaft and thirty feet of drifts.

**Ophir Gold Mining Company (The).**—Incorporated under the laws of New York in 1873; Marmaduke Richardson, New York City, trustee; office Maiden Lane, New York City; owns the Burroughs lode, 462x50 feet; situated at Nevadaville, Nevada Mining district; located in 1859, and patented in 1870; vein a fissure, with a crevice four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from two to ten ounces gold per cord, and the smelting-ore from $15 to $50 per ton, when sorted; developed by two shafts 650 and 1,000 feet in depth, with considerable drifting and stoping, working the vein out to a depth of 700 feet; output about $1,000,000.

**Orinoco.**—Frederick Halky, Z. L. Boyd, and J. C. Harris, owners; C. Thomas, J. Prowse, and J. L. Harris, all Nevadaville, Colo., lessees to July, 1884; claim 1500x150 feet; situated on Nevada Flats, Nevada district, three-fourths mile from Nevadaville; located in 1882; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling from two to fifteen ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by a shaft eighty-five feet deep.

**Ouray.**—John F. Klein, Central City, Colo., Matthew Boellet and Wm. Fick, both Black Hawk, Colo., owners; claim 1500x150 feet; situated at Central City, Central City Mining district; located in 1878, and patented in 1881; vein a fissure, with a crevice three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to twenty ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one forty-foot shaft.

**Palms Gold Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $500,000, in 50,000 shares $10 each, non-assessable; president, Francis L. Palms; vice-president,

Jos. Kingel; secretary and treasurer, John P. Fleitz—all Detroit, Mich.; general manager, Paul Lindstrom, Central City, Colo.; offices Nos. 53 and 55 Gratiote Avenue, Detroit, Mich., and Central City, Colo.; owns the Galena lode, 1140x100 feet, and Bugher 225x50 feet; situated at Central City, Central City Mining district; located in 1861, and patented in 1882; vein a fissure, with a crevice four feet wide, and a pay streak from one to three feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one and one-fourth to eight ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by a shaft 335 feet in depth and 300 feet of levels; output $100,000.

**Parole and Buena Vista.**—Two claims, 1500x150 and 1400x150 feet, respectively; Harley B. Morse, Central City, Colo., and Frederick S. Basling, Nevadaville, Colo., owners; claims situated on North Nevada Hill, Nevada Mining district, and one mile from Central City; located in 1879, and Parole patented in 1881; veins both fissures, with pay streaks about two and one-half feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to seven ounces gold per cord, and the smelting-ore from $40 to $60 per ton; Parole developed by ten shafts from ten to forty feet in depth, and Buena Vista by a shaft seventy feet in depth; output $4,000.

**Perigo.**—(See Rollins Gold and Silver Mining Company.)

**Pewabic Mill.**—Owned by the Republic Gold Mining Company; works situated in Russell Gulch, three miles from Central City, Colo.; main building (wood and iron) 70x40 feet, containing twenty-five Stamps, motive power for the same being supplied by a fifty-horse-power engine; capacity twenty-five tons in twenty four hours.

**Pike's Peak.**—(See Egyptian Group.)

**Pisga and Pisga Extension.**—Richard and James Mackey, both Nevadaville, Colo., owners; claims 1500x150 feet; situated on Mt. Pisga, Lincoln Mining district, three miles from Central City; located in 1879; vein a fissure, with a crevice from three to five feet in width, containing galena, which assays $100 per ton, with a quartz gangue; developed by one shaft 110 feet in depth.

**Pizzaro Extension Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $2,000,0000, in 200,000 shares of $10 each, non-assessable; president, I. R. Bishop; vice-president, Wm. Tweed; secretary, C. D. Pierce; treasurer, Ed. Munk—all Philadelphia, Pa.; general manager, Wm. H. Cheatley, Central City, Colo.; offices 140 South Third street, Philadelphia, Pa., and Central City, Colo.; owns the Pizzaro Extension, 1500x150 feet; situated on Bald Mountain, Nevada Mining district; located in 1880, and patented in 1882; vein a fissure, with a crevice four feet wide, and a pay streak ten inches, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock assaying from one to three ounces gold per cord, and the smelting-ore $95 per ton; developed by one eighty-five-foot shaft.

**Pizzaro Gold and Silver Mining Company (The.)**—Incorporated under the laws of Colorado; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, I. R. Bishop; secretary, C. D. Pierce; treasurer, A. Wasserman—all Philadelphia, Pa.; general manager, Wm. H. Cheatley, Central City, Colo.; offices 140 South Third street, Philadelphia, Pa., and Central City, Colo.; owns the Pizzaro, Home stake, and Argo lodes, 1500x150 feet each; situated on Bald Mountain, Nevada Mining district;



located in 1880; veins all fissures, with crevices from one to three feet wide, containing galena in a quartz gangue, which assays from 112 to 240 ounces silver per ton; Pizzaro developed by a shaft 152 feet in depth and 200 feet of levels; Home-stake by two shafts forty and seventy feet in depth, respectively; and Argo by a shaft thirty-five feet in depth.

**Pleasant View Mining Company (The).**—Incorporated under the laws of Colorado, in 1874; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, J. Bemel, Denver, Colo.; secretary, John Best, Central City, Colo.; office Central City, Colo.; owns the Pleasant View lode; situated at Central City, Central City Mining district; located in 1865, and patented in 1873; vein a fissure, with a crevice eight feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to six ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one 475-foot shaft and 500 feet of drifts; worked by a thirty-five-horse-power engine; output twenty-five cords per month.

**Polar Star.**—Jonas Washburn, Denver, agent; John J. Reilley, Central City, superintendent; claim 1500x150 feet; situated on Negro Hill, one mile from Central City, Quartz Valley Mining district, and entered for patent; vein a fissure five feet wide, pay streak three feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to twelve ounces gold per cord, and the smelting-ore $70 per ton, gross; developed by one shaft 110 feet deep and some drifting; output $3,000.

**Polar Star.**—John G. Hatch, Richard Jenkins, and O. P. Russell, all Central City, Colo., owners; claim 1500x150 feet; situated on Casto Hill, Quartz Valley Mining district, three-fourths of a mile from Central City; located in 1862; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, two ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one shaft 125 feet deep.

**Polar Star Mill.**—Wm. Fullerton, Black Hawk, Joseph Kimber, Denver, and —— Young, California, owners; main building (stone) 150x90 feet; situated in Clear Creek Gulch, and established in 1859; containing thirty-five Stamps, motive power for the same being supplied by a thirty-horse-power engine; capacity thirty tons per day (twenty-four hours).

**Post Hole and East Nevada.**—Richard Mackey, Nevadaville, Colo., owner, Wm. Richards, manager; claims together cover 2000x150 feet; situated on Gunnell Hill, Nevada Mining district; located in 1862, and patented; vein a fissure, with a crevice from one to six feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, six ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one 340-foot shaft and some drifting.

**Powers.**—Otto F. Meister, St. Louis, Mo., owner; Henry Paul and others, Idaho Springs and Central City, Colo., lessees to July, 1885; claim 1500x150 feet; situated in Willis Gulch, Russell Mining district; located in 1876, and patented in 1880; vein a fissure, with a crevice two feet wide, containing copper and antimony, carrying gold and silver, milling $150 per ton, when sorted from the gangue-rock; developed by a shaft 200 feet in depth and 200 feet of drifts; worked by a ten-horse-power engine; output by lessees 1,000 tons, and the property is shipping regularly.

**Prize and Senderberg.**—J. W. Bostwick & Co., Central City, Colo., owners; Prize lode is divided into two sections, 1150x150 feet and

200x150 feet; Senderberg 1400x50 feet; situated on Prize Hill, Nevada Mining district, three-fourths mile from Central City; located in 1863; Prize patented in 1879 and Senderberg patented in 1873; veins both fissures, with pay streaks about three feet wide, containing gold-bearing quartz and iron pyrites, with galena, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore from $15 to $40 per ton; Prize developed by one 675-foot shaft and 1,100 feet of drifts; worked by a thirty-five-horse-power engine; output about $400,000.

**Prompt Pay.**—Owned by the Gold Coin Mining Company, and leased to Charles W. Price, Otto Sauer, and W. P. Rice, all Central City, Colo., and L. C. Snyder, Black Hawk; claim 1500x150 feet; situated on Alps Hill, Russell Mining district; patented in 1882; vein a fissure, with a crevice from three to four feet in width, and a pay streak from eighteen inches to three feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to four ounces gold per cord, and the smelting-ore from $150 to $200 per ton; developed by one 140-foot shaft and some drifting; output $2,500.

**Prospector.**—W. H. Knight and others, Boston, Mass., owners; claim 1500x150 feet; situated in Chase Gulch, Quartz Valley Mining district; located in 1879, and patented in 1881; vein a fissure four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to three ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by one shaft 170 feet deep and 400 feet of levels; worked by an eighteen-horse-power engine.

**Public Sampling Works.**—Robert A. Campbell, Central City, and Wm. R. Rust, Black Hawk, Colo., owners; works established in July, 1881; situated at Black Hawk, being the buildings formerly occupied by the Boston and Colorado Smelting Company; main or sampling building (brick) 60x40 feet, containing Blake Crusher and Cornish Rolls, motive power for the same being supplied by a twenty-five-horse-power engine, and an automatic sampler, retaining one-ninth of the ore, in order to obtain an equitable sample; receiving-house (frame) 180x75 feet; capacity 100 tons, with separate bins; warehouse (stone) 150x70 feet, and other buildings, all connected by steam tram-ways for transporting ore from one to another; capacity of works from thirty-five to forty tons in ten hours, and during 1882 9,600 tons of gold ore were sampled, having a net value of $480,000, besides $20,000 worth of silver or :. The Company does not buy ore, but samples for the public at regular rates.

**Puritan.**—Peter French, Central City, Colo., owner; claim 1500x150 feet; situated in North Clear Creek, Mountain House district, two and one-half miles from Central City; located in 1882; vein a fissure, containing galena in a quartz gangue; developed by a tunnel twenty feet in length.

**Pyrennes.**—(An extension of the Nimrod.)

**Quartz Hill Mining and Tunneling Company (The).**—Incorporated under the laws of Colorado in 1879; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president and manager, H. J. Kruse; secretary and treasurer, B. H. Koch; trustees, Elias Goldman, Joseph W. Bostwick, and Henry Altvater, all Central City, Colo.; owns a tunnel site 3000x6 feet; situated on Quartz Hill, Central City district; on which a tunnel is driven 1,100 feet long, cutting ten well defined fissure veins, with crevices from two to four feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to eight ounces gold per cord, and the smelting-ore from $15 to $45 per ton, on which veins ten locations have been made, 1500x150 feet each.



**Quartz Mill Group.**—Comprising the Quartz Mill, Caledonia, Exchange, and Massillon lodes; John Reilley, Joseph Thatcher, and others, Central City, Colo., owners; claims 1500x150 feet each; situated in Leavenworth Gulch, Russell district, two miles from Central City; located in 1880; veins all fissures, with crevices from three to eight feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to six ounces gold per cord, and the smelting-ore from $200 to $300 per ton; Quartz Mill developed by a shaft 130 feet in depth, and the others by shafts from ten to thirty feet in depth.

**R. H. D.**—David Jenkins & Son, Central City, owners; claim 1500 x150 feet; situated on Negro Hill, Quartz Valley district; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from five to ten ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by a number of shafts, exposing the vein for a distance of 500 feet.

**Railroad.**—(See Little Bobtail Gold and Silver Mining Company.)

**Rainbow, Southwark, and Bosom Friend.**—L. and S. Sternberger, 503 Market street, Philadelphia, Pa., owners; claims 1500x150 feet each; situated at the Mouth of Peck Gulch, Fairfield district, two and one-half miles from Central City; located in September and October, 1881; veins both fissures three and four feet in width, containing galena and gray copper in a quartz gangue-matter; Rainbow developed by a shaft 100 feet in depth, and Southwark and Bosom Friend by two shafts eighty feet in depth each.

**Ralls County.**—(See St. Louis Gold Mining Company.)

**Randall.**—(An Extension of Forks); Geo. Sparks and O. T. Sparks, both Nevadaville, Colo., owners; claim 1000x150 feet; situated on Forks Hill, Nevada Mining district, at Nevadaville, Colo.; located in 1864; vein a fissure, with a crevice from four to six feet in width, and a pay streak eighteen inches, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, from six to nine ounces gold per cord, and the smelting-ore $127 per ton; developed by a shaft 200 feet in depth and 180 feet of drifts; output $16,000.

**Randolph Mill Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $48,000, in 480 shares of $100 each, non-assessable; president, Henry R. Wolcott, Denver; general manager, secretary and treasurer, G. E. Randolph, Central City; office Central City; owns a stamp-mill situated at Black Hawk; main building 60x90 feet, of brick, containing fifty Stamps, motive power for same being supplied by a fifty-horse-power engine; capacity forty-five tons in twenty-four hours.

**Rara Avis Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, James Stewart, Jr.; vice-president, A. G. Postlethwaite; secretary and treasurer, George Stark—all Philadelphia; superintendent, George S. Robertson, Central City; offices 306 Stock Exchange Place, Philadelphia, and Central City—owns the Rara Avis, J. P. Whitney, and Little Mack lodes, 1500x150 feet each; situated on Prosser Hill, Eureka Mining district, three-fourths of a mile from Central City; located in 1862; veins all fissures, with crevices from four to five feet in width, and pay streaks from four inches to two feet, containing galena, zinc blende, and sulphurets, with some native and ruby silver, milling, when sorted from the gangue-rock, from 25 to 450 ounces silver per ton; Rara Avis developed by a

shaft ninety feet in depth, J. P. Whitney by a shaft 366 feet and 300 feet of levels, with a tunnel 1,100 feet in length. and worked by a fifteen-horse-power engine

Also owns a concentration-works, situated at the foot of Prosser Hill, three-fourths of a mile from Central City; main building 50x40 feet, containing Tasker Pulverizer, Frue Vanners, and Rittinger Tables; motive power for the same being supplied by a twenty-five-horse-power engine; capacity sixty tons per day.

**Rarus.**—Situated on the divide between Lake Gulch and North Clear Creek; the developments consisting of a shaft about 100 feet deep, showing a body of argentiferous galena in a quartz gangue, promising fairly.

**Republic Gold Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $500,000, in 100,000 shares of $5 each, non-assessable; president, Joseph E. Gay; secretary and treasurer, R. A. Rickard—both New York City; general manager, A. N. Rogers, Central City; offices 32 Pine street, New York, and Central City; owns the following claims: Pewabic and Iron 1500x150 feet each, Oldtown 1200x150 feet, Bangor 1300x150 feet, Bobtail 800x150 feet, Humboldt 1000x150 feet, Grasshopper and Incidental 1500x150 feet each; situated in Russell Gulch, Russell district, three miles from Central City, and Pewabic and Bangor patented; veins all fissures, with crevices averaging three feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore from $40 to $120 per ton; developments are principally on the Pewabic, Oldtown, Iron, and Bobtail, and consist of six shafts, 450, 400, 400, 280, 150, and 120 feet in depth, with considerable drifting and stoping; improvements—three sets of hoisting machinery, motive power for the same being supplied by two forty-horse-power engines, an incline plane 1,100 feet long, laid with double tracks for transporting the ore from the mine to the mill (see Pewabic Mill); output about 800 tons per month.

**Return.**—Sidney W. Tyler, Central City, Colo., owner; claim 1500x 150 feet; situated in Missouri Gulch, Hawkeye Mining district, three miles from Central City; located in 1878, and patented in 1880; vein a fissure, with a crevice three feet wide, containing galena assaying fifty ounces silver per ton, with a quartz gangue-matter; developed by a shaft 175 feet in depth and 150 feet of drifts.

**Rialto.**—Thomas Mullen, Central City, Colo., owner; claim situated within the limits of Central City, Central City Mining district, and patented; vein a fissure, varying in width and containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, three and one-half ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by a shaft 100 feet deep and one 250-foot adit.

**Richardson Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $50,000, in 50,000 shares of $1 each, non-assessable; secured by bonds redeemable in ten years or sooner, the Company reserving right to reduce number of shares; president, D. H. Baldwin; vice-president, Lewis Jones; secretary and treasurer, Thomas J. Barbour—all New York City; office 10 Pine street, New York; owns the Richardson lode, 900x50 feet, and Guernsey and Baldwin lodes, 1500x150 feet each; situated in Russell Gulch, Russell Mining district, three miles from Central City; located in 1859, and patented in 1872; veins all fissures, with crevices from four to seventeen feet in width, and pay streaks from four to forty inches, containing gold-bearing quartz and iron and copper pyrites, the first-class stamp-rock milling, when sorted, from three to fourteen ounces gold net per cord, the second-class from two to seven ounces, and the



smelting-ore from $20 to $50 per ton; the Richardson developed by a shaft 400 feet deep, with three compartments, and 1,000 feet of drifts, showing in the lower workings large quantities of argentiferous gray copper, and the other claims by a number of shafts; worked by a Copeland & Bacon twenty-five-horse power double engine and other machinery; output from ten to fifty tons per week; property is leased to E. E. Pray, Central City, for three years from October 9, 1882.

**Right.**—Hal. Sayr and N. D. Owen, both Central City, Colo., owners; claim 1500x150 feet; situated in Spring Gulch, Central City Mining district; located in 1874, and patented in 1880; vein a fissure, with a crevice from two to five feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore $80 per ton; developed by one fifty-foot shaft and one 300-foot tunnel, with some drifting.

**Rival.**—Situated on Silent Friend Mountain, near the Colorado Chief; vein a fissure, varying in width, and containing a material which promises fairly; the developments consisting of one shaft.

**Robert Emmet.**—John E. Morris, William H. Nichols, and Timothy O'Connell, all Central City, owners; claim 1500x150 feet; situated in Chase Gulch, Quartz Valley Mining district; located in 1863; vein a fissure three and one-half feet wide, pay streak eighteen inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three and one-half to eighteen ounces gold per cord, and the smelting-ore $140 per ton; developed by shafts, 40, 96, 100, 137, and 180 feet in depth, a 450-foot tunnel, and 160 feet of drifts; output $25,000.

**Robert G. Ingersoll.**—Frederick Kruse, Central City, Colo., John B. Ballard and Richard Mosley, both Black Hawk, Colo., owners; claim 1500x150 feet; situated in Chase Gulch, Gregory Mining district, one-fourth mile from Central City, Colo., and patented in 1882; vein a fissure, with a crevice twelve feet wide, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock assaying from one to three ounces gold per cord, and the smelting-ore from $150 to $175 per ton; developed by two seventy-foot shafts.

**Roderick Dhu.**—(See Stevens & Deaver Gold Mining Company.)

**Rollins Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $5,000,000, in 200,000 shares of $25 each, non-assessable; president, John Q. A. Rollins, Rollinsville, Colo.; vice-president, Horace Reed; secretary and treasurer, Elisha Cole—both New York; superintendent, George W. Barrett, Rollinsville, Colo.; offices 145 Broadway, New York, and Rollinsville; owns the following claims: Colorado, Perigo, Crown Point, Virginia, Ophir, Comstock, and thirty-one other claims, covering 1,100 acres of surface ground and 275,000 feet in lineal measurement; situated three miles from Rollinsville; veins all fissures, in the Perigo from ten to forty feet wide, and in the others from one to six feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from four to six ounces gold per cord, and the smelting-ore about $40 per ton, net; Perigo developed by a 240-foot shaft, a 350-foot tunnel, and 600 feet of drifting, the latter connecting with a tunnel 953 feet in length on the Crown Point, and a 430-foot tunnel on the Colorado, besides some drifting; output for 1882, $60,000; also owns 360 acres of patented placer ground adjoining the lode claims.

Also owns a stamp-mill, situated at Rollinsville, containing fifty Stamps,

motive power for the same being supplied by a sixty-five-horse-power engine; capacity forty-five tons per day (twenty-four hours), at which the Company's ore is treated.

**Rough-and-Ready.**—Edward W. Henderson, Harley B. Morse, and James Collins, all Central City, Colo., and Jos. M. Marshall and Thomas M. Patterson, both Denver, Colo., owners; claim 1500x150 feet; situated on Rough-and-Ready Hill, Fairfield Mining district, two and one-half miles from Central City; located in 1879, and in process of patent; vein a fissure, with a crevice three feet wide, and a pay streak two feet, containing gray copper and galena in a quartz gangue, which mill-runs, when sorted, 400 ounces silver per ton; developed by a shaft seventy-five feet in depth and a level sixty feet in length; output $3,000.

**Rough-and-Ready.**—John J. Reilley, John Cameron, and Michael Flynn, all Central City, owners; claim 1500x110 feet; situated on Gunnell Hill, at Central City, Central City Mining district; located in 1874; vein a fissure five feet wide, pay streak three feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to twelve ounces gold per cord, and the smelting-ore from $15 to $45 per ton; developed by a shaft 125 feet in depth and one forty-foot drift.

**Running Group.**—Consisting of the Running and Cumberland lodes; H. Humphries, Jr., Idaho Springs, owner; claims cover 3500x150 feet; situated on Bobtail Hill, at Central City, Enterprise district, and patented in 1874 and 1882; vein a fissure from three to six feet wide, pay streak from one to three feet, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock milling, when sorted, from $8 to $10 per ton, and the smelting-ore from $25 to $65; developed by one 700-foot tunnel, one 300-foot shaft, and 1,200 feet of drifts, with some stoping; improvements—one fifteen-horse-power engine, shaft and ore houses.

**Russell District Gold and Silver Mining Company (The).**—President, Abraham H. Reynolds; secretary, James C. Hutchison; treasurer, Samuel Bonnell, Jr.—all Kingston, Pa.; agent, Thomas Wilson, Golden, Colo.; owns the War Dance, War Dance Extension, Rose-and-Plume, Princess Louise, Tiger, Big Wampum, Abe Reynolds, Maggie, and New Brunswick lodes, covering between thirty and forty acres of surface ground; situated in Willis and Russell Gulches, Russell district; veins all fissures, with crevices from two to six feet in width, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; the developments consisting mainly of assessment work.

**Saratoga Gold Mining Company (The).**—Incorporated under the laws of New York in 1882; president, M. S. Frost, New York City; vice-president, John Best, Central City, Colo.; treasurer, E. I. Frost; secretary and general manager, W. D. Cameron—both New York; offices 139 Broadway, New York City, and Central City; owns the Saratoga Group; situated on Saratoga Mountain, Russell district; veins all fissures, with crevices from six to ten feet in width, and pay streaks containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, from two and one-half to fourteen ounces gold per cord, and the smelting-ore from $15 to $45 per ton; property is being developed by a cross-cut tunnel, opening up the Saratoga vein, the latter displaying rich ore, the same being designed to cut the veins in all the other claims, and one shaft 150 feet in depth; worked by a 100-horse-power engine.

**Saxon.**—Harley B. Morse, Central City, Colo., owner; claim 1500x150 feet; situated on Mammoth Hill, Gregory district, one-fourth mile from Central City, and in process of patenting; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by three shafts from twenty to forty feet deep and 150 feet of drifts.



**Saint Clair.**—1500x150 feet; situated near the head of Russell Gulch; on which the developments, one 120-foot shaft and some other workings, show a fissure vein, varying in width, containing gold-bearing quartz and iron and copper pyrites, and promising fairly.

**Scandia.**—(See Central City Gold and Silver Mining Company.)

**Schiller.**—(See Lucerne Mining Company.)

**Schuyler.**—I. .C Schuyler, Central City, owner; claim 1500x150 feet; situated in Russell Gulch, Russell Mining district, and patented; vein a fissure, with a crevice from two to six feet in width, containing gold-bearing quartz and yellow and gray copper, with galena, the stamp-rock assaying four and one-half ounces gold per cord, and the smelting-ore $30 per ton; developed by two shafts ninety-eight and seventy-five feet in depth.

**Senderberg.**—(See Prize and Senderberg.)

**Shaft.**—(An extension of the Prize); A. M. Albro, Nevadaville, Colo., and Henry Hyatt, Denver, Colo., owners; claim 1500x150 feet; situated on Prize Hill, Nevada Mining district; located in 1859, and patented in 1870; vein a fissure, with similar characteristics to the Prize; developed by three shafts, 100, 90, and 80 feet in depth.

**Shamrock.**—(See Belfast and Shamrock.)

**Shaw.**—(See North.)

**Silent Friend.**—Situated on Silent Friend Mountain, about a mile and a half from Central City; the developments consisting of one shaft, showing a material which promises fairly.

**Silver Bell Group.**—Comprising the Silver Bell, Forget-me-not, and Paris lodes, 1500x150 feet each; John Sparks and others, Nevadaville, Colo., owners; claims situated on Waite's Ranch, Eureka Mining district, one mile from Nevadaville, Colo.; located in 1881; veins all fissures, with crevices from three to four feet in width, and pay streaks from four to twenty-four inches, containing black sulphurets, gray copper, and chlorides, in a quartz gangue, milling, when sorted, 300 ounces silver per ton; Silver Bell developed by a shaft seventy-eight feet in depth, Forget-me-not by three shafts, forty, forty-five, and sixty feet, and Paris by a shaft thirty-eight feet; output $7,000; property is under lease to Z. and J. Nicholas, Nevadaville, to October 1, 1885.

**Silver Cloud and Michigan Central.**—Two adjoining claims on the same vein, 1500x150 feet each; John Tierney and Wm. Burk, both Central City, Colo., owners; claims situated at Black Hawk, Enterprise Mining district; located in 1862, and patented in 1872; vein a fissure, with a crevice from four to twelve feet in width, containing native silver and sulphurets in a quartz gangue, milling, when sorted, 200 ounces silver per ton; developed by a shaft 200 feet in depth, with some drifting.

**Silver Dollar and Piper Heidseick.**—Thomas Manning and others, New York City, owners; Charles L. Harker, Central City, Colo. superintendent; claims 1500x150 feet each; situated in Willis Gulch, Russell district; patented in 1880; veins both fissures, with crevices from two to five feet wide, and pay streaks from four to twelve inches, containing gray copper, in a quartz gangue, which mill-run, when sorted, $60 net per ton; the Silver Dollar developed by a double-compartment shaft 260 feet in depth, from which run levels as follows: at a depth of 90 feet, 165 feet east and 130 feet west; at 150 feet, 285 feet east and 183 feet west, and at 225 feet, 176 feet east; one of which intersects the Piper Heidseick vein; worked by a twenty-five-horse-power engine.

**Silver King Consolidated Mining and Milling Company (The.)**—Incorporated under the laws of Colorado, February 9, 1880; capital stock $2,500,000, in 100,000 shares of $25 each, non-assessable; principals, Chas. E. White, Samuel P. Blogden, Geo. H. Holt, S. N. Kane, and Henry E. Bowers, all New York; general manager, Paschal R. Smith, Denver, Colo.; superintendent, James Collins; office Windsor Hotel Building, Denver, Colo.; owns the Alaska, Silver King, Run, Little Chicago, Quebec, Lucky Joe, Big Chicago, Lillie, Climax, Poplar Grove, Catch-all, and Nellie Gray lodes, 1500x150 feet each; situated in Hawkeye Mining district, near Central City; Alaska, Silver King, and Nellie Gray lodes patented; veins all fissures, with crevices from two to six feet in width, containing galena and gray copper in a quartz gangue, assaying from 50 to 150 ounces silver per ton; Nellie Gray developed by a shaft 175 feet deep, Alaska by a 300-foot shaft and 500 feet of drifting, and others by shafts from fifteen to seventy-five feet in depth.

**Smart.**—Situated on Perigo Mountain, a little east of the Perigo lode, about three miles from Rollinsville, on which are two shafts twenty and forty feet in depth, respectively, showing a well defined fissure vein, containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly.

**South Freiberg.**—(See Freiberg Gold and Silver Mining Company.)

**St. Louis Gold Mining Company (The).**—Incorporated under the laws of Colorado in 1879; capital stock $250,000, in 10,000 shares of $25 each; non-assessable; president, Charles Gage; vice-president, J. M. McDowell; secretary and treasurer, Nathan Cole—all St. Louis; general manager, D. S. Green, Central City, Colo.; offices 4,010 Manchester Road, St. Louis, and Central City; owns the Ralls County, 1014½x50 feet; situated on Quartz Hill, adjoining the Kent County mine; patented in 1879; vein a fissure, with a crevice from four to six feet wide, and a pay streak from two to four feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to three and one-half ounces gold per cord, and the smelting-ore $16.56 per ton; developed by a shaft 700 feet in depth and 1,500 feet of drifts, with considerable stoping; worked by a forty-horse-power engine; output ninety tons per month.

**St. Louis Group.**—Comprising five adjoining claims on the same vein, viz.: the St. Louis, St. Louis Extension, and St. Louis Numbers 2, 3, and 4, covering 5000x150 feet; Frank Kilbourn, Central City, Colo., owner; claims situated on Gunnell Hill, Eureka Mining district, at Central City; all patented in 1881, except Nos. 3 and 4; vein a fissure, with a crevice from two to four feet wide, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock milling, when sorted, from four to eight ounces gold per cord, and the smelting-ore from $15 to $25 per ton; St. Louis developed by one 430-foot shaft and 1,000 feet of drifts, St. Louis Extension by one 380-foot shaft and 100 feet of drifting; worked by one twenty-horse-power engine; output $550,000.



**Star of the Mountains.**—John G. Hatch and Harrison Schaffer, both Central City, Colo., owners; claim 1500x150 feet; situated on Bates or Casto Hill, Quartz Valley Mining district, three-fourths mile from Central City; located in 1860; vein a fissure four and one-half feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, two ounces gold per cord, and the smelting ore from $15 to $25 per ton; developed by a shaft 140 feet deep and some drifting.

**Star of the West.**—E. Sherwood and Jacob Franks, both Central City, and E. Beard, Denver, Colo., owners; claim 500x50 feet; situated in Russell and Lake Gulches, Lake Mining district, one and three-fourths miles from Central City; located in 1862, and patented in 1872; vein a fissure, with a crevice two feet in width, and a pay streak twelve inches, containing galena and native silver in a quartz gangue, milling, when sorted, from 80 to 100 ounces silver per ton; developed by a shaft 135 feet in depth and a drift from bottom of shaft 100 feet in length.

**Star of the West.**—M. H. Mullen and Patrick Mullen, both Central City, Colo., owners; claim 2000x50 feet; situated in Lake Gulch, Lake Mining district; located in 1869, and patented in 1871; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to eight ounces gold per cord, and the smelting-ore from $50 to $75 per ton; developed by a fifty-foot shaft and 100 feet of drifts.

**Starling.**—Owner Paschal R. Smith, Denver; superintendent, James Collins, Central City; claim 1500x150 feet; situated in Quartz Valley Mining district, near Central City, and patented; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling four ounces gold per cord, and the smelting-ore $45 per ton; developed by a tunnel on the vein 170 feet long; output $1,500.

**Starry Flag.**—Wm. E. O'Hea & Co., Black Hawk, owners; claim 1500x150 feet; situated on Silver Mountain, Enterprise Mining district, three miles from Central City; located in 1881; vein a fissure two feet wide, pay streak six inches, containing galena and zinc blende in a quartz gangue, milling, when sorted, from 50 to 100 ounces silver per ton; developed by a shaft forty feet in depth.

**Stevens and Deaver Gold Mining Company (The).**—Incorporated under the laws of New York, in 1864; president, J. P. G. Foster, New York City; offices 52 Wall street, New York, and Central City; owns the Roderick Dhu, 500x50 feet; situated on Quartz Hill, Nevada Mining district, one mile from Central City; located in 1860, and patented in March, 1874; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron and copper pyrites with galena, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore from $15 to $48 per ton; developed by a shaft 650 feet deep and 500 feet of drifts; worked by a twenty-five-horse-power engine; output $208,000; property is now under lease to E. W. Henderson, Michael Steadman, and M. Whalen, Central City and Nevadaville.

**Stirling.**—Thomas H. Potter and H. J. Hawley, both Central City, owners; claim 1500x150 feet; situated at Central City, Central City Mining district; located in 1860, and patented in 1877; vein a fissure, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, five ounces gold per cord, and the smelting-ore from $15 to $30 per ton; developed by a shaft 100 feet deep.

**Stub-tail.**—John G. Hatch, Central City, Colo., owner; claim 950x 150 feet; situated on Gunnell Hill, Central City Mining district, one-fourth mile from Central City; located in 1862, and in process of patent; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, one and one-half ounces gold per cord, and the smelting-ore from $15 to $25 per ton; developed by one shaft 120 feet deep.

**Sunset.**—Sidney W. Tyler, Central City, L. C. Snyder and Edward Blake, both Black Hawk, Colo., owners; claim 1500x150 feet; situated at Hughesville, Hawkeye Mining district, three miles from Central City, Colo.; located in 1878, and patented in 1881; vein a fissure, with a crevice from two to eight feet wide, containing native and brittle silver, assaying 100 ounces silver per ton with, a quartz gangue; developed by three shafts, 60, 80, and 100 feet in depth.

**Surprise and Exchequer.**—Andrew Bitzenhofer and Alfred Wettstein, both Central City, Colo., owners; claims 1500x150 feet each; situated at the head of Peck Gulch, Vermilion Mining district, five miles from Central City; located in 1869, and in process of patent; veins both fissures, with crevices from four inches to two feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to fifteen ounces gold per cord, and the smelting-ore from $15 to $25 per ton; developed by two shafts 50 and 100 feet in depth and a number of drifts from ten to twenty-five feet long; output from the Surprise $5,000.

**Susan Mary.**—Otto Sauer, Wm. Sholl, and E. H. Fontain, all Central City, Colo., owners; claim 1500x150 feet; situated on Bobtail Hill, Gregory Mining district, one mile from Central City; located in 1862, and patented in 1881; vein a fissure, with a crevice two feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore $114 per ton; developed by a shaft 147 feet in depth.

**Susquehana Gold and Silver Mining Company (The).**—Incorporated under the laws of Pennsylvania, in 1865; president, Albin Garrett, Philadelphia, Pa.; agent, F. H. Messinger, Central City, Colo.; office 1,008 Chestnut street, Philadelphia, Pa.; owns the German lode 915x50 feet; situated near Central City, Gregory Mining district; located in 1859, and patented in 1876; vein a fissure, with a pay streak three feet wide, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore from $15 to $30 per ton; developed by a shaft 500 feet deep and 1800 feet of drifts, with some stoping; worked by a twenty-five-horse-power engine.

**Tennessee Tunnel.**—(See Denver Gold Company.)

**Thanksgiving.**—John Key, Chris Gray, Thomas Langdon, Alfred Stonell, Arthur Stonell, and Wm. White, all Black Hawk, Colo., owners; claim 1500x150 feet; situated on Bobtail Hill, Gregory Mining district; located in 1876; vein a fissure, with a crevice from two to three feet wide, contiainng gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, one and one-half ounces gold per cord, and the smelting-ore $15 per ton; developed by a shaft 125 feet deep and forty feet of drifting.

**Thanksgiving Group.**—D. S. Green, Central City, and A. J. Williamson, Denver, Colo., owners; group comprises the following lodes: Thanksgiving, Walter Lee, Frank B., Carl J., Li Alta, Lady Helen, and Thanksgiving Extension, 1500x150 feet each; situated on Harper's Ranch, Quartz Valley Mining district; located in 1878; veins all fissures, with crevices from one to six feet in width, containing chlorides of silver in a quartz gangue, milling, when sorted, 108 ounces silver per ton; developed by two shafts 100 and 105 feet in depth, and 400 feet of drifting, connecting the veins in the different claims.



**Thurmond & Hamilton Concentrator.**—Owned by Thurmond & Hamilton, Central City, Colo.; building (stone) 130x50 feet; situated in Russell Gulch; containing the Thurmond dry-concentrating machinery, the method of treating ore being, first, to dry it by means of driers erected in the mill, then carry it to a crusher, after which it passes through Cornish Rolls, and from thence it falls into the concentrator; the latter being a tight wedge-shaped box, through which a current of air is constantly drawn by means of a fan at the larger end, increasing the current of air at the smaller end, and thus graduating it, at the upper side of the large end graduated screens being placed; the air passing from underneath through the screens and pulverized ore, lifting the lighter gangue and carrying it out, while the heavier ore falls through the screens; after passing down the space enlarges, and in this the gangue settles, from whence it is carried away by elevators; all the work being automatically performed.

**Thurmond Group.**—Three adjoining claims on the Rough-and-Ready vein, viz.: Thurmond, Waterloo, and Bonanza lodes; Edward W. Henderson and Nathan A. Sears, both Central City, Colo., and Jos. M. Marshall, Denver, Colo., owners; claims 1500x150 feet each; situated on Rough-and-Ready Hill; located in 1879; vein a fissure, with a crevice four feet wide, containing galena, which assays 250 ounces silver per ton, with a quartz gangue; Thurmond developed by a shaft eighteen feet deep, Waterloo by a thirty-foot shaft and a tunnel eighty feet in length, and Bonanza by a twenty-five-foot shaft.

**Tierney.**—(See Centennial Tunnel Mining Company.)

**Tom Tucker Group.**—Consisting of Tom Tucker, Unity, and Perseverance; James Powell, Black Hawk, owner; claims 1500x150 feet each; situated on Silver Mountain, Enterprise Mining district; located in 1880; vein a fissure, averaging two and one-half feet in width, pay streak sixteen inches, containing galena and black sulphurets in a quartz gangue, milling, when sorted, from fifteen to forty ounces silver per ton; developed by a tunnel 100 feet long, cutting the three veins.

**Topeka and Cooper.**—Hal. Sayr, Central City, owner; claims 800x50 feet each; situated in Russell Gulch, Russell Mining district, one mile from Central City, and patented; veins both fissures, from two to four feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from one to two and one-half ounces gold per cord, and the smelting-ore from $40 to $100 per ton; developed by one shaft 150 feet deep and some other workings.

**Toronto.**—Drips, Jones & Co., Central City, Colo., owners; claim situated at Hughesville, Enterprise Mining district, four miles from Central City, Colo.; located October, 1878; vein a fissure, with a crevice from four to ten feet in width, and a pay streak from two to five feet, containing galena, native silver, and chlorides, in a quartz gangue, milling, when sorted, from 50 to 500 ounces silver per ton; developed by one main shaft 120 feet in depth, with an eighty-foot level running therefrom at a depth of eighty feet, and several other shafts from twenty-five to eighty-five feet deep, showing large ore-reserves; output, in aggregate, $40,000, and for 1882 $8,157.40.

**Transit.**—Hal. Sayr and N. D. Owens, both Central City, Colo., owners; claim 1500x150 feet; situated in Quartz Valley Mining district, two miles from Central City; located in 1879; vein a fissure, with a crevice from one to ten feet wide, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock milling, when sorted, from one to two and one-half ounces gold per cord, and the smelting-ore about $75 per ton; developed by one thirty-foot shaft and one 400-foot tunnel, with some drifting.

**Tropic.**—(See Clear Creek County.)

**Tyrone.**—John E. Morris, Central City, and H. M. Orahood, Denver, Colo., owners; claim 1500x150 feet; situated on Clear Creek, Fairfield district, two miles from Central City; vein a fissure four and one-half feet wide, containing sulphurets and gray copper in a quartz gangue, milling, when sorted, from 100 to 300 ounces silver per ton; developed by three shafts, ten, fifteen, and eighty-four feet in depth.

**U. S. M.**—Lou. C. Snyder and E. S. Blake, both Black Hawk, and William Nichols, Central City, owners; claim 838x50 feet; situated at Central City, Central City district; located in 1878, and patented in 1882; vein a fissure four feet wide, pay streak twenty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to five and one-half ounces gold per cord, and the smelting-ore from $15 to $30 per ton; developed by one shaft 120 feet deep and one forty-foot drift.

**Unexpected.**—Situated on Bobtail Hill, a little south-west of the Arctic, Gregory district; vein a fissure varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites, both yielding fairly; developments—two shafts 200 and 137 feet in depth, connected by a seventy-six-foot level, with some other levels; improvements—hoisting and pumping machinery and some buildings.

**Union Tunnel.**—(See Bonanza and Union Tunnel and Mining Company.)

**United Gregory Gold Mining Company (The).**—Incorporated under the laws of New York in 1880, with capital stock $300,000, in 300,000 shares of $1 each, non-assessable; president, George G. Magoun, New York; vice-president, T. H. Peabody, Boston, Mass.; secretary and treasurer, George F. Crane, New York; superintendent, F. G. Nagle, Black Hawk, Colo.; offices No. 1 Nassau street, New York, and Central City, Colo.; owns the property formerly belonging to the Briggs Company, and consisting of 1719x50 feet on the Gregory vein, and 519x50 feet on the Briggs vein; situated on Gregory Mountain, Gregory district, at Black Hawk, Colo., and patented; veins both fissures, with a pay streak in the Gregory three feet in width and in the Briggs one foot, in each case containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three ounces gold per cord, and the smelting-ore about $75 per ton, net; developments—two shafts about 670 and 995 feet in depth on the Gregory and Briggs veins, respectively, with over 4,000 feet of other shafting, drifting, winzes, and raises, and considerable stoping, these workings opening up the leads to a vertical depth of about 1,000 feet, besides a 900-foot air-shaft; improvements—one thirty-horse-power hoisting-engine and one 100-horse-power pumping-engine, with ample boilers, ore-houses, shaft-houses, etc.; monthly shipments 200 cords; output for 1882 $145-000, including both stamping and smelting ore; also owns a stamp-mill at Black Hawk; main building (brick) 100x75 feet, containing fifty Stamps, motive power for the same being supplied by a 100-horse-power engine; capacity forty-five tons per day (twenty-four hours); this mill is situated on the Gregory lode, and from it a shaft has been sunk on the vein 915 feet in depth.



**Utah.**—Elias Goldman, Central City, Colo., owner; claim 1500x150 feet; situated on Bobtail Hill, Central City Mining district; relocated in 1880; vein a fissure, with a crevice four feet wide, and a pay streak two and one-fourth feet, containing gold-bearing quartz and iron pyrites, the stamp-rock milling, when sorted, six ounces gold per cord, and the smelting-ore from $15 to $30 per ton; developed by a shaft eighty feet in depth.

**Valley View Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, J. C. Kennedy, Denver, Colo.; vicy, president, W. A. Davis, St. Louis, Mo.; secretary, C. W. Price, Central Cit Colo.; treasurer, L. D. Porter, St. Louis, Mo.; office Central City, Colo.; owns the Billings lode, 700x150 feet; situated on Bates or Casto Hill; located in 1862, and patented in 1881; vein a fissure about four feet wide, pay streak from ten to twenty inches, containing gold-bearing quartz and galena, with iron and copper pyrites, the stamp-rock milling, when sorted, two and one-half ounces gold per cord, and the smelting-ore $20 per ton; developed by one 400-foot tunnel on the vein, a shaft from the floor of the tunnel 100 feet deep, and about 100 feet of drifts; output $50,000; and the Harkaway, Irene, Doc. Beers, Lulu Bowen, and Alvin Adams, 1500x150 feet each; situated on Nigger Hill, all in Quartz Valley district, and patented, with the exception of Alvin Adams; veins all fissures, with crevices from two and one-half to six feet in width, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to six ounces gold per cord, and the smelting-ore from $15 to $40 per ton; Harkaway developed by a shaft 250 feet deep and 250 feet of drifts, with a seventy-foot shaft where the Irene and Harkaway cross each other; output $10,000; and others by shafts of varying depths.

**Valverde.**—(See Boss Group.)

**Virginia and Crown Point.**—Two adjoining claims on the same vein, 1500x150 feet each; Thomas Potter, Wm. H. Cheatley, Harley B. Morse, J. V. Kimber, and Geo. H. Gray, all Central City, Colo., owners; claims situated on Pewabic Mountain, Virginia Mining district, three miles from Central City; located in 1860, and patented in 1880; vein a fissure, with a crevice eight feet wide, and a small pay streak on each wall, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, three and one-half ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by one shaft 129 feet deep, three other shafts 100 feet deep each, and 200 feet of drifts.

**Wain.**—(See Empire Mining and Milling Company.)

**War Dance.**—(See Russell District Gold and Silver Mining Company.)

**Wash-cash.**—Situated in Russell Gulch, near the Richardson, about three miles from Central City; vein a fissure varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; the developments consisting of two shafts on the vein.

**Weitbrec.**—(An extension of the Williams); John Jordan and John Weitbrec, both Central City, Colo., owners; claim 150x50 feet; situated in Lake Gulch, Lake Mining district, three miles from Central City; located in 1880; vein a fissure, with characteristics similar to the Williams vein; developed by 500 feet of levels.

**West Pewabic.**—(West extension of Pewabic); Michael Klein & Son, owners; claim 1500x150 feet; situated in Russell Gulch, Russell Mining

district; vein a fissure, with a crevice from two to six feet in width, and a pay streak from three to eight inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to ten ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by one shaft 125 feet deep, from which levels are being run at a depth of 100 feet.

**Western Reserve Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in the winter of 1881 and 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, E. S. Hutchinson; secretary and treasurer, J. S. Tilden; corresponding secretary, R. S. Webb—all Garrettsville, Ohio; general manager, N. Sargent, Denver; office Garrettsville, 271 Seventeenth street, Denver, and Central City; owns the I. X. L. lode, 900x150 feet; situated on the west slope of Winnebago Hill, Eureka district, at Central City; relocated in 1880; vein a fissure from two to six feet wide, pay streak from eighteen to thirty inches, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, four ounces gold per cord, and the smelting-ore $85 per ton; developments—one main working shaft 200 feet deep, two other shafts 160 and 90 feet in depth, with connecting levels aggregating 600 feet; improvements—steam hoisting machinery and steel cable, with shaft-house; output $8,000, from the development work.

**Wheeler Mill.**—Situated on North Clear Creek, near Black Hawk, containing twenty-five Stamps, with the necessary motive power; capacity twenty-five tons per day (twenty-four hours).

**Whitcomb Mill.**—Company owns a stamp-mill situated at Nevadaville, containing twenty-five Stamps, with the necessary motive power.

**White Cloud.**—Geo. W. Maynard and others, New York City, owners; manager, Henry Paul, Idaho Springs, Colo.; offices 24 Cliff street, New York, and Idaho Springs, Colo.; claim 1000x50 feet; situated at the head of Virginia Cañon, Russell Mining district, Gilpin County, and Idaho Mining district, Clear Creek County; located in 1865, and patented in 1872; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz and iron pyrites and galena, the stamp-rock milling, when sorted, from two to nineteen ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by one 415-foot shaft and 1,000 feet of levels; worked by a twenty-horse-power engine and slack-belt hoister, with complete skip arrangements; output previous to 1880 $15,000, and since 1880 $20,000, with large ore-reserves, and the property promising well.

**Whitney.**—(See Rara Avis Mining Company.)

**Williams.**—J. S. Updegraff, Central City, and others, owners; claim 1500x150 feet; situated in Lake Gulch, one and one-half miles from Central City, Lake Mining district; relocated in 1878, and patented in 1882; vein a fissure, from four to six feet wide, pay streak from ten to twenty inches, containing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two and one-half to three ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by one 410-foot shaft and 210 feet of drifts.

**Williams.**—Owned by the Gilpin County Mining Company (unincorporated) and others; K. G. Cooper, Denver, Colo, agent.; office *Republican* Building, Denver, Colo.; claim 550x50 feet; situated in Lake Gulch, Lake Mining district, three miles from Central City; located in 1859, and patented in 1867; vein a fissure, with a crevice eight feet wide, and a pay streak from twenty to thirty-six inches, containing gold-bearing quartz and iron and copper pyrites, with galena, the stamp-rock milling, when sorted, from two to eighteen ounces gold per cord, and the smelting-ore from $28 to $61 per ton; developed by one main shaft 568 feet deep with a drift on the vein running



therefrom 1,500 feet long, and some stoping; output prior to 1881 $140,000, and from December 1, 1881, to December 1, 1882, 3,000 tons of stamping-ore and 360 tons of smelting-material; property is under lease to John Jordan, Central City, to May 1, 1883.

**Williamsville.**—Situated on Bobtail Hill, somewhat south of the Bobtail; vein a fissure varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both showing fairly; the developments consisting mainly of assessment work, the shaft being down about seventy-five feet.

**Wilson Mining Company (The).**—Owns the Lizzie, Bengal, Japan, and Sunshine, four full claims, situated on Quartz Hill, near the Missouri mine; veins all fissures varying in width, and containing gold-bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), both yielding fairly; developments consisting mainly of shafts, varying in depth.

**Winnebago.**—Situated on Casto Mountain, at Central City; vein a fissure from three to four feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, about four ounces gold per cord, and the smelting-ore $40 per ton; developments—one main shaft 450 feet in depth, other shafts aggregating about 650 feet, and 1,000 feet of drifting; output over $300,000, and the vein will be cut at a depth of 1,000 feet by the British-American Tunnel.

**Wood.**—W. H. Doe, Idaho Springs, and John McShane, Denver, owners; claim 1500x150 feet; situated in Eureka Gulch, Eureka Mining district, at Central City; patented in 1881; vein a fissure, with a crevice from ten to twenty feet, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from three to seven ounces gold per cord, and the smelting-ore from $15 to $35 per ton; developed by a shaft 240 feet in depth and some drifting.

**Wyandotte Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $600,000, in 200,000 shares of $3 each, non-assessable; president and treasurer; Eli Mygatt, vice-president, B. A. Farnham; secretary, J. W. Mersereau, Jr.—all New York; superintendent, Levi Harsh, Central City; offices 16 Broad street, New York, and Central City, Colo.; owns the Wyandotte and Elmer, two adjoining claims on the Harsh vein, 1500x150 feet; situated on the divide between Russell and Leavenworth Gulches, one and one-half miles from Central City; vein a fissure from four to ten feet wide, containing gold-bearing quartz and iron and copper pyrites, the stamp-rock milling, when sorted, from two to ten ounces gold per cord, and the smelting-ore about $70 net per ton; and the Leavenworth, East Leavenworth, Gold Ring, Crawford County or West Wyandotte, Mollie Newcomb, and Calhoun, 1500x150 feet each, adjoining the property already mentioned; veins all fissures from two to six feet in width, containing a stamping and smelting-ore, similar in quality to that in the Wyandotte and Elmer; developments—one main shaft on the Wyandotte about 400 feet deep, and another shaft on the Crawford County 265 feet deep, with a 245-foot level connecting them, and a cross-cut from the former vein 140 feet long, with other levels and cross-cuts running from the main shaft, aggregating over 600 feet, and from the Crawford County aggregating about 350 feet, a shaft—the Taylor—on the Leavenworth 280 feet deep, and 180 feet of levels, with a number of other shafts, levels, and cross-cuts, connecting with the workings mentioned, and considerable stoping; improvements—hoisting and pumping machinery, ore and shaft houses; output from the Leavenworth about $500,000, from the others about $50,000, but the Company was doing development work mainly in 1882, the product being only about $8,000, but the property is now in good condition, with large ore-reserves.

# Grand County.

ThisCounty occupies a portion of the extreme northern part of the State, and is bounded on the west by Routt, on the south by Eagle and Summit, and on the east by Boulder and Larimer counties. It has an estimated population of 2,200, with Grand Lake as the county seat, and covers an area of 3,381 square miles; a territory, in early days, the favorite reservation and hunting-ground of the Northern Utes, and, of all other sections, the most reluctantly parted with. Though surrendered according to treaty stipulations, it was only recently wholly abandoned; and were it not for the mineral discoveries made a few years since in one or two of the mountain ranges, it would now be an inviting field for the hunter and trapper.

The principal properties are situated on the Rabbitt-ear Range, near the center of the County, where mining has been carried on for some years by a small band of men who cling to their faith on the future of their district with great tenacity. The veins are said to be large and the ores a combination of the sulphides of iron, lead, zinc, and copper, assaying from $20 to $100 per ton; but the absence of reduction-works adapted to the proper treatment of these minerals nearer than Denver, with the Continental Divide intervening and heavily covered with snow more than half the year, no decided advancement can be made, however good the resources, until the district is reached by railways.

**Carbonate Group.**—M. V. B. Gillette, Greeley, and the New York and Lead Mountain Mining Company, of New York, owners; group comprises ten claims, 1500x300 feet each; situated on Lead Mountain, Lead Mountain Mining district, twenty-two miles north of Grand Lake; located in 1879; veins all contacts, with crevices from two to five feet in width, seamed with galena, assaying from $20 to $100 per ton, in a quartz gangue; developed by 500 feet of tunnels.

**Copper Glance.**—(See Copper King and Copper Glance.)

**Copper King and Copper Glance.**—C. McMahan, W. P. Norris, and C. I. Hayes, all Argentine, Colo., owners; claims 1500x300 feet each; situated on Red Cañon Creek, and on the west side of North Park, Independence district, twenty-five miles due west of Walden; located in September, 1881; veins both fissures, with crevices fifteen feet in width, and pay streaks about four feet, containing sulphurets of copper, assaying twenty per cent copper, seven ounces silver, and one ounce gold per ton, in a quartz gangue; developed by fifty feet of shafts and adits.

**Endomille.**—1500x300 feet; situated on the Rabbit-ear Range, near the Center of the County; vein probably a fissure, about twenty feet wide, containing sulphides of iron, lead, and zinc, assaying from $20 to $35 per ton, in a quartz gangue-matter; the developments consisting of shafts and levels, from which considerable ore has been extracted, and showing large ore reserves.

**Garfield Silver Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, J. H. Becker, Denver; vice-president, J. H. Richter, Cincinnati, Ohio; secretary, Henry Baumgarten; treasurer, Peter Schaefer—both Denver; general manager, W. Ebert, George



town; offices Georgetown, Colo., and 387 Blake street, Denver, Colo.; owns five claims, 1500x300 feet each; situated on Jones and La Plata Mountains, La Plata Mining district, twenty miles from Georgetown; located in 1881; veins all fissures, with crevices about six feet wide, and pay streaks averaging four inches, containing galena, assaying 160 ounces silver per ton, in a quartz gangue; developed by 108 feet of shafts.

**Gold Run Placer.**—500 acres; situated on Willow Creek, about twelve miles from Hot Sulphur Springs, containing a deep alluvial deposit, the ground being quite rich, but the gold very fine and hard to save.

**Gray's Peak Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; president, John R. Brewer; vice-president, Francis Bartlett; secretary and treasurer, Wm. L. Candler—all Boston, Mass.; manager, S. Ware, Denver, Colo.; offices 40 Water street, Boston, Mass., and Empire, Colo.; owns the La Plata, La Plata Extension, Boston, Brookline, and Lucy lodes, 1500x300 feet each; situated on Ware Mountain, La Plata Mining district, fifteen miles from Empire; veins all fissures, with crevices from ten to twenty feet wide, containing streaks of sulphurets of silver in a quartz gangue, milling, when sorted, from 50 to 200 ounces silver per ton; developed by two tunnels 100 and 507 feet in length and one shaft 100 feet deep.

**Independence Mountain Placer.**—160 acres; situated on Independence Mountain and in North Park, fifteen miles from Pinkhampton, Independence district; located in 1875; owners C. McMahon and A. C. Dewees, both Argentine, David Johnson and Chas. Henderson, Leadville, and Joel Henderson and Jere N. Hill, both Denver; developed by 135 feet of fluming, 100 feet of pits, one forty-two-foot shaft; worked by ground-sluice; production probably $3 a day per man.

**La Plata.**—(See Gray's Peak Mining Company.)

**Mohawk Group.**—Lafayette Joslyn and M. V. B. Gillette, both Greeley, Colo., owners; group comprises the Mohawk, Buena Vista, and Galena No. 2, 1500x300 feet each; situated on Lead Mountain, Lead Mountain district, two miles from Lulu and twenty-three miles from Grand Lake; located in 1880; veins all contacts, with crevices from two to four feet wide, containing galena in a quartz gangue; developed by three shafts, one on each lode, twenty feet in depth each.

**Park, Nos. 1 and 2.**—M. V. B. Gillette and Lafayette Joslyn, both Greeley, owners; claims 1500x300 feet each; situated on Shoop Mountain, Lead Mountain district; located in 1880; vein a fissure, with a crevice from two to four feet wide, and a pay streak from three to twelve inches, containing galena, assaying ninety ounces silver per ton, in a quartz gangue; developed by two shafts twenty-four and forty feet in depth.

**Queen of the West.**—300x1500 feet; situated on the west slope of Bowen Mountain, six miles from Gaskill, Wolverine district; located July, 1882; owners W. F. Bowen, Breckenridge, and James Corlett, Kokomo; vein a fissure three feet wide, pay streak five inches, containing gold and silver bearing quartz, assaying $100 per ton; developed by one tunnel fifteen feet long.

**Wolverine.**—1500x300 feet; situated on the Rabbit-ear Range, near the geographical center of the County; vein a fissure about two feet wide, containing sulphides of iron, zinc, lead, and copper, in a quartz gangue, assaying from $50 to $100 per ton; the developments consisting of shafts and levels, and are extensive, showing large ore-reserves, with about 100 tons on the dumps awaiting treatment.

# Gunnison County.

This County lies west of the Continental Divide, and is bounded on the north by Pitkin, on the east by Chaffee, on the south by Saguache, Hinsdale, and Ouray, and on the west by Montrose and Delta Counties. It covers an area of 3,300 square miles, and has an estimated population of 12,000, with Gunnison City as the county seat and chief center, and Crested Butte, Ruby, Irwin, Gothic, Pitkin, and others, all towns of more or less note.

Gunnison was created by legislative authority in 1877, and about two years thereafter became the scene of considerable excitement, thousands of enthusiastic prospectors venturing the prediction that another Leadville would be found somewhere in this then comparatively unknown territory. People rushed in from all parts of the country, the most extravagant imageries of hidden wealth haunting the dreams of the host who waited for the spring of 1879 to open and admit them to the Promised Land; and when it came the flood poured in, overspreading the mountains and valleys like a cloud. A year later it had disappeared, leaving, however, a number of substantial fragments here and there; and to these are owing the discovery and development of all that is good in the County; and whilst the glowing expectations of the pioneers have not been, and never will be, realized, yet sources of wealth have been unearthed that will endure for ages. If there were nothing found further than the marvelous deposits of iron and coal (bituminous and anthracite), the effort would have been amply rewarded; and the many large and promising tracts of mineral land, now undergoing profitable development, are, to say the least, cause for congratulation. Its area has, however, been imperfectly prospected as yet, and only a small fraction of its resources brought to light; but each succeeding year will add to the number, and in the not distant future we may expect to see the annual output of Gunnison amounting to millions. The industry of mining is assuming decided importance, and although the ores are, as a rule, low-grade, yet being practically unlimited, will, with the advent of transportation facilities and suitable reduction-works, become very productive.

The Tin Cup district, near the eastern boundary of the County, about forty miles north-east of Gunnison City, is the oldest settlement in the Elk Mountain region and the largest producer of bullion. Its geological formation varies greatly in different sections, giving different characteristics to the lodes. On Gold Hill the veins in some of the properties are bedded in limestone, while in others they are contacts between limestone and porphyry, and on Anna Mountain the veins are fissures in an eruptive granite. The ores of the district are of the altered surface varieties, giving evidence of the existence of considerable iron, copper, lead, and some silver glance, native silver, etc., yielding from 25 to 500 ounces silver and from $3 to $30 in gold per ton.

The Quartz Creek district, the hope and pride of Pitkin, has assumed something more than a local importance through a number of recent gold and silver discoveries. Until a little over eighteen months ago its only communication with the outside centers was a rough wagon road, but the advent of the South Park Railway came like a blessing to the isolated miners, who at once showed their appreciation of it by sending out hundreds of tons of ore; and as a consequence there has been a steady increase of population and trade, of mining and milling appliances, and capital for the expansion of internal pursuits.



The Elk Mountain district, including Copper, Rock, Brush, and several other creeks, with Gothic as the principal town, has several productive mines and many prospects. It only needs the advantages offered by cheap transportation and well advised reduction-works, adapted to the various mineral combinations, to become a productive region.

The Ruby district, with Irwin as its center of supplies, has some valuable properties, and the customary percentage of prospects, many of which will become mines, with the proper development. The veins are generally fissures, cutting sedimentary rocks, with occasional occurrences in eruptive formation, and of contacts between the eruptive and sedimentary series, the ores contained therein comprising the sulphides of iron, zinc, lead, and copper, with a large percentage of gray copper and ruby and native silver, milling, when sorted, from 100 to 200 ounces silver per ton.

The Tomichi district has several shipping mines, and other properties preparing their low-grade ores for the concentrators. Its geological formation is granitic on the west side of Tomichi Creek, and granitic, eruptive, and sedimentary on the east side. The veins are usually quite large, with contents generally of a medium grade, but occasionally very rich.

**Abbett.**—John Abbett and John Lynch, both Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, twenty-six miles from Buena Vista; located in 1882; vein a contact, with a crevice nine feet wide, and a pay streak from two to fifteen inches of gray copper, sulphurets, and chlorides in a quartz gangue; developed by a shaft twenty-one feet in depth.

**Ajax No. 1.**—John Lynch and E. R. Collins, both Buena Vista, Colo., owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, twenty-six miles from Buena Vista; located in 1882; vein a fissure, with a crevice thirty feet wide, and a pay streak from six to twenty inches, containing galena, gray copper, and sulphurets, assaying from 50 to 150 ounces silver per ton, with a quartz gangue; developed by an open cut twenty feet in length, with a fifteen-foot face.

**Ajax No. 2.**—John Abbett, John Lynch, Richard Hanley, and others, Buena Vista, Colo., owners; claim 1500x300 feet; situated in Waterloo Gulch, and on Texas Creek, East and Middle Texas district, twenty-five miles from Buena Vista; located in 1882; vein a fissure, with a crevice from five to ten feet in width, and a pay streak from six to twenty inches, containing gray copper and sulphurets, assaying 220 ounces silver per ton, with a quartz gangue; developed by a shaft eleven feet in depth.

**Alaska.**—Nathaniel Shurtliff, James Burdick, James Cowley, Martin Scott, and M. Fitzgerald, all Irwin, owners; claim 1500x300 feet; situated in Justice Basin, Ruby district, one and one-half miles from Irwin; located in January, 1882; vein a fissure, with a crevice thirty feet wide, and a pay streak from six to twenty inches of quartz and galena, with some ruby silver, assaying from 50 to 500 ounces silver per ton; developed by a shaft eighty feet in depth and a level twenty feet in length.

**Albert.**—Lemuel Kingsbury, Gunnison City, Colo., owner; claim 1500x300 feet; situated at the junction of Peeler and O-Be-Joyful streams, three and one-half miles from Ruby, Ruby district; located in 1880; vein a fissure, with a crevice five feet wide, and a pay streak from two to ten inches, contain-

ing gray copper and galena, assaying 100 ounces silver per ton, with a quartz gangue; developed by a shaft thirty-five feet in depth, two open cuts fifteen and twenty feet in length, and a tunnel eighteen feet long.

**Alcyon.**—Tingley S. Wood and J. D. McCarthy, both Leadville, Colo., and J. T. Peters, Springfield, Ill., owners; claim 1500x300 feet; situated on the south slope of Pearl Mountain, Elk Mountain Mining district, sixteen miles from Crested Butte; located in 1880; vein a fissure containing galena, assaying from 93 to 105 ounces silver per ton, with a quartz gangue; developed by a tunnel twenty-five feet in length and an incline twenty-five feet long.

**Alhambra.**—Charles Riggins and E. A. Hall, both Tin Cup, Colo., owners; claim 1080x300 feet; situated on Gold Hill, Tin Cup Mining district, three and one-half miles from Tin Cup, and patented; vein a contact, with a pay streak twelve inches wide, containing lead and copper carbonates, assaying 500 ounces silver per ton, with a decomposed gangue; developed by a tunnel fifty feet in length.

**Alice.**—E. W. Shearer and J. S. McCullough, both Crested Butte, Colo., owners; claim 1500x300 feet; situated on Richmond Mountain and in Dark Cañon, Elk Mountain district, ten miles from Crested Butte; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak fifteen inches, containing galena, assaying thirty per cent lead and thirty-five ounces silver per ton, with a quartz gangue; developed by a tunnel on the vein fifteen feet long.

**Amazon and Amazon No. 2.**—C. R. Berry, C. C. Runner, F. C. Garbitt, and W. D. Wright, all Buena Vista, owners; claims 1500x300 feet each; situated at the head of Davis Basin, East and Middle Texas district, twenty-one miles from Buena Vista; located in 1881; vein a fissure, with a crevice from four to seven feet wide, and a pay streak seven inches, containing quartz and galena, assaying thirty per cent lead and 200 ounces silver per ton; developed by a shaft ten feet in depth and an open cut twenty feet in length.

**American Flag.**—E. C. McCarniher, Tin Cup, Colo., owner; claim 1500x300 feet; situated on American Mountain, Tin Cup district, three and one-half miles from Tin Cup; located in 1881; vein a contact, with a crevice ten feet wide, containing quartz and galena, assaying thirty-five per cent lead and fifty ounces silver per ton; developed by a shaft twenty feet in depth.

**Anna Dedricka.**—L. D. Neerland, C. F. Abbey, and Charles Ware, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district; located in 1878; vein a contact, with a crevice five feet wide, and a pay streak from two to two and one-half feet, containing galena in a quartz gangue, milling, when sorted, forty ounces silver per ton; developed by three shafts, forty, fifty-two, and seventy feet in depth, and two levels twenty and thirty feet in length.

**Anna Mountain Mining, Milling, and Tunnel Company (The).**—Owns the Anna Mountain lode, 1500x300 feet; situated in the Tin Cup Mining district; developments—one tunnel 265 feet in length, showing a vein of very fair material.

**Antelope and Little Daisy.**—Alexander Gullett, Gunnison City, D. B. Powers, Salina, Kansas, and R. C. Evans, Crested Butte, owners; claims 1500x300 feet each; situated in Evans Basin, Ruby district, two miles from Ruby; located in 1879; veins both fissures, with crevices six feet and twenty-two inches wide, containing quartz and galena, assaying eighty-four ounces silver per ton; developed by a shaft twenty feet in depth and a tunnel thirty feet long.



**Anthracite Mesa Coal Mining Company (The).**—Incorporated under the laws of Colorado, October 10, 1882; capital stock $300,000, in 3,000 shares of $100 each, non-assessable; president, W. A. Bell, Colorado Springs, Colo.; vice-president, D. C. Dodge, Denver; secretary and treasurer, Howard F. Smith, Crested Butte, Colo.; owns 940 acres of coal land; situated three miles north of Crested Butte; containing veins, or strata, of anthracite coal, three, three and one-half, and six feet in thickness, on which tests show ninety per cent of fixed carbon; developments—six tunnels from twenty to sixty feet long and two entries 225 and 360 feet long; improvements—one fifty-horse-power engine and coal-breaker; output 500 tons per day.

**Arcade.**—Matteson, Johnson & Co., Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup Mining district, near Tin Cup; vein a contact, with a crevice four feet wide, containing low-grade galena in a quartz gangue; developed by a shaft thirty-five feet in depth.

**Arcadia.**—George Madison and Nelson Johnson, both Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, three and one-half miles from Tin Cup; located in 1879; vein a fissure, with a crevice two and one-half feet wide, and a pay streak from six to eighteen inches, containing gold-bearing quartz, assaying $30 per ton; developed by a shaft forty-five feet in depth and a tunnel forty feet in length.

**Argo.**—Daniel Donovan, John Kinkade, and Philip Harrington, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Seigel Mountain, Tin Cup district, six and one-half miles from Tin Cup; located in 1880; vein a contact, with a crevice two feet wide, and a pay streak six inches, containing galena and copper, assaying seventy-five ounces silver per ton, with a quartz gangue; developed by a tunnel eighty feet in length.

**Argo.**—John C. Darby, S. Morris, A. O. Elliott, and John McKay, all Irwin, Colo., and J. E. Wood, Kansas, owners; claim 1500x300 feet; situated in Democrat Basin, Ruby district; located in June, 1880; vein a fissure, with a crevice four feet wide, and a pay streak four inches, containing gray copper, with silver glance, native silver, and galena, assaying thirty ounces silver per ton, in a quartz gangue; developed by a shaft sixteen feet in depth.

**Armstrong Gulch Consolidated Silver Mining Company (The).**—Incorporated under the laws of New York, in September, 1881; capital stock $1,250,000, in 250,000 shares of $5 each, non-assessable; president and treasurer, H. Courteille; vice-president, Benj. R. Western; secretary, W. A. Hull—all New York City; general manager, Achille Falco, Pitkin, Colo.; offices No. 8 Broad street, New York City, and Pitkin, Colo.; owns the Lost Trail, Independent, and Two Pilgrims lodes, 1500x300 feet each; situated on Fairview Hill, and in Armstrong Gulch, Quartz Creek Mining district, four miles from Pitkin; located in 1879, and in process of patent; veins all contacts, with crevices from three to nine feet wide, containing chlorides and sulphurets, assaying from 75 to 150 ounces silver per ton, in a quartz gangue; developed by three shafts from 65 to 168 feet in depth, a tunnel fifty feet in length, and an incline 140 feet long on the vein.

**Avery Smelter.**—C. O. Avery, Chicago, Ill., owner; works built by Fraser & Chalmers, Chicago; situated one-fourth mile south-east of Gothic, and established in 1880; smelting-building 80x30 feet, containing two Fraser & Chalmers Furnaces of twenty tons capacity each, eight Roasting-ovens, Blake Crusher, Cornish Rolls, revolving screens, elevators, automatic ore-feeder, and complete improved machinery for sampling and smelting ores; motive power supplied by a fifty-horse-power engine; capacity forty tons in twenty-four hours.

**Bald Eagle.**—Lauren T. Baxter, Crested Butte, Colo., and Geo. S. Parsons, Vermont, Colo., owners; claim 1500x300 feet; situated in Poverty Gulch, Elk Mountain district, ten miles from Crested Butte; located in 1877; vein a fissure, with a crevice three feet wide, and a pay streak from eight to ten inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty per cent lead and fifty ounces silver per ton; developed by a tunnel on the vein fifteen feet in length.

**Baltimore.**—S. P. Spencer, W. P. Rose, and A. C. Snider, all Irwin, Colo., owners; claim 1000x300 feet; situated in O-Be-Joyful Basin, Ruby district, eight miles from Crested Butte; located in 1880; vein a fissure, with a crevice eight feet wide, and a pay streak from six to eighteen inches, containing quartz and galena, assaying forty-seven ounces silver per ton; developed by a shaft nineteen feet in depth.

**Bay City and Red Fraction.**—E. H. Stafford, T. M. S. Rhett, both Buena Vista, Colo., owners; Bay City 1500x300 feet, Red Fraction 1200x 300 feet, and situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice seven feet wide, and a pay streak from four to thirty inches, containing chlorides and sulphurets in a carbonate-of-lime gangue, assaying from 20 to 200 ounces silver per ton; developed by a tunnel thirty feet in length and two shafts eighteen and thirty-two feet in depth.

**Bees-wax.**—L. L. Harding, Irwin,Colo., and F. H. Kellogg and Henry DeFrees, both Gunnison City, Colo., and John Hergat, Pekin, Ill., owners; claim 1500x300 feet; situated in Elk Basin, Ruby district, one and one-half miles from Irwin; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak ten inches, containing quartz carrying ruby, wire, and native silver, assaying from 100 to 500 ounces silver per ton; developed by a shaft 140 feet in depth and 160 feet of tunnels.

**Belcher.**—J. W. Forrest, W. S. Sevier, and L. D. Pearsall, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on East Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1879; containing two contact veins, with crevices eighteen and thirty inches in width of quartz and iron, assaying twenty-three ounces silver per ton; developed by a shaft seventy-five feet in depth.

**Belle Flora**—H. H. Halford, Gunnison City, Colo., owner; J. J. Donnelly, Gunnison City, Colo., agent; claim 1500x300 feet; situated in Gold Basin, Gunnison district, ten miles south of Gunnison City; located in May, 1881; vein a fissure, with a crevice forty feet wide, containing quartz carrying a free-milling gold ore, which yields two ounces gold per ton; developed by a shaft twenty-two feet in depth and an open cut seventeen feet in length.

**Belmont Group.**—L. L. Harding, S. S. Metzler, Wm. Kent, and John McAlroy, all Irwin, Colo., owners; group comprises the Belmont, Belmont Extension, Alice H., and Silver Banner, 1500x300 feet each, and Silver Banner Tunnel site, 2500x6 feet; situated in Elk Basin, Ruby Mining district, one mile from Irwin; located from 1879 to 1881; veins all fissures,with crevices from two to four feet wide, and pay streaks from eighteen to twenty inches, containing galena with ruby and brittle silver, assaying from 50 to 300 ounces silver per ton, in a quartz gangue; developed by two shafts thirty feet deep each and three tunnels from 30 to 150 feet in length.

**Ben. Lucas.**—H. W. Hitchcock, Gunnison City, and Hudson Burr, Bloomington, Ill., owners; claim 1500x300 feet; situated on Sheep Mountain, Elk Mountain district; located in June, 1881; vein a fissure, with a crevice



four feet wide, containing quartz and galena, assaying from 110 to 450 ounces silver per ton; developed by a shaft seventy feet in depth and twenty feet of drifts.

**Berrien and Furniture Boy.**—Sprigg Shackleford and Charles Shackleford, both Gunnison City, E. F. Colburn, Irwin, L. B. Wheat, Leadville, and L. B. Treat and others, Denver, Colo., owners; claims 1500x300 feet each; situated at the head of Washington Gulch, Ruby district, four miles from Crested Butte; located in 1880; veins all fissures, with crevices from six to fourteen feet in width, and pay streaks from four to twelve inches, containing quartz and galena, with iron pyrites, assaying two and one-half ounces gold and seven ounces silver per ton; developed by two shafts thirty and forty feet in depth.

**Bertie Allen Group.**—S. M. Davis, Wm. West, G. B. Schafer, Cal. Smith, and T. H. Ball, all Gunnison City, owners; group comprises the Bertie Allen, Bertie Davis, S. M. Davis, Iron Jaw, Star of Texas, Thistle, and four other lodes, 1500x300 feet each; situated on Texas Creek, Texas Creek district; located in 1881; veins all fissures, with crevices from two to eight feet wide, containing quartz carrying galena and native and brittle silver and gray copper, milling, when sorted, 350 ounces silver per ton; developed by a shaft on each lode from twelve to twenty feet in depth.

**Bessie.**—A. Lumley, J. B. Baush, —— Beardsley, and J. O. Minshall, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, six and one-half miles from Tin Cup; located in 1879; vein a contact, with a crevice eighteen inches wide, and a pay streak six inches, containing galena, assaying 400 ounces silver per ton, in a quartz gangue; developed by a tunnel twenty-five feet in length.

**Big Casino.**—John Dempsey, Benjamin Getty,and Chas. Iatt,all Pitkin, Colo., owners; claim 1500x300 feet; situated on a spur of Islet Mountain, Quartz Creek district, two miles from Pitkin; located in 1881; vein a contact, with a crevice one foot wide, containing lead carbonates, assaying fifty per cent lead and sixty ounces silver per ton, with a decomposed gangue; developed by a tunnel sixty feet in length.

**Big Elephant.**—(See Cascade Mountain Mining Company.)

**Big Galena.**—J. O. Minshall and J. B. Farwell, both Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district; located in 1879; vein a contact, with a crevice two feet wide, and a pay streak five inches containing galena, which assays forty per cent lead and fifty ounces silver per ton; developed by a tunnel fifty feet in length.

**Billy Babbitt.**—W. P. Babbitt, J. F. Pearson, R. E. Slavin, J. Y Turner, and Rich. Duckatt, all Pitkin, Colo., owners; claim 1500x300 feet; situated on Cumberland Ridge, Quartz Creek district, three and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice three feet wide, and a pay streak twelve inches containing gold-bearing quartz, milling one and one-third ounces gold per ton; developed by a tunnel sixty feet in length and a shaft twenty feet in depth.

**Black Bess.**—R. A. Long and Mrs. A. C. Cramer, both Crested Butte, and A. G. Dearing, Pueblo, Colo., owners; claim 1500x300 feet; situated in O-Be-Joyful Basin, Ruby district, three and one-half miles from Irwin; located in 1880; vein a fissure, with a crevice ten feet wide, and a pay streak from six to twenty-four inches, containing galena and brittle silver in a quartz gangue,

which mill-runs, when sorted, ten per cent copper, thirty per cent lead, four-tenths ounces gold, and twenty-seven ounces silver per ton; developed by one forty-foot tunnel.

**Black Dragon Coal Banks.**—W. J. Muncey, Robert Traverse, J. W. Skinner, W. H. White, and Frank Michael, all Irwin, Colo., owners; group comprises the Black Dragon, Black Diamond, and Tuscarora coal claims, covering 1,920 acres; situated eighteen miles north of Irwin; containing three veins of anthracite coal, from five to seven feet in thickness, and cropping out on the surface; developments slight.

**Black Hawk.**—B. C. Gray and Warner Bros., all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Gold Hill, near Gold Cup mine, Tin Cup district; located in 1861; vein a contact, with a crevice twelve inches wide, and a pay streak one and one-half inches, containing galena and copper, assaying from 50 to 100 ounces silver per ton, with a quartz gangue; developed by a shaft forty feet in depth.

**Black Hawk.**—Jefferson Harper, Kansas, owner; J. H. Philips, Gunnison City, agent; claim 1500x300 feet; situated in Rustler Gulch, Elk Mountain district, six miles from Gothic; located in 1880; vein a fissure, with a crevice from thirty to thirty-six inches in width, and a pay streak from four to twelve inches, containing galena and gray copper, assaying from 75 to 500 ounces silver per ton, with a quartz gangue; developed by a shaft fifty feet in depth.

**Blarney Stone.**—A. N. Perrault, C. A. Knapp, and H. G. Sutton, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1879; vein a contact, with a crevice four feet wide, and a pay streak from four to eighteen inches, containing galena and sulphurets, assaying forty ounces silver per ton; developed by a tunnel forty feet in length.

**Bonanza.**—Alexander Gullett, F. C. Gowdy, C. W. Burris, and John R. Wallingford, all Gunnison City, Colo., and D. B. Power, Salina, Kansas, owners; claim 1500x300 feet; situated one mile above Gothic, Elk Mountain district; located in 1880; vein a fissure, five and one-half feet in width, pay streak twelve inches, containing quartz and galena, assaying sixty-two ounces silver per ton; developed by a shaft forty feet in depth and an open cut twenty feet in length.

**Bonanza King.**—Theo. H. Thomas, I. P. Cartwright, and W. H. Hunt, all Park City, Colo., and J. J. Donnelly, Gunnison City, Colo., owners; claim 1500x300 feet; situated in Elk Basin, Ruby district; located in June, 1880, and in process of patent; vein a fissure, with a crevice three feet wide, and a pay streak fourteen inches, containing galena and ruby silver, assaying 250 ounces silver per ton, in a quartz gangue; developed by three shafts from twenty to thirty feet in depth.

**Bonnie Scotland.**—C. W. Cornell and H. M. Black, both Irwin, Colo., owners; claim 1500x300 feet; situated in Ruby Basin, Ruby Mining district, two miles from Irwin; located in 1880; vein a fissure, with a crevice three feet wide, and a pay streak from six to twenty-four inches, containing galena, brittle silver, and copper, assaying six per cent copper and forty ounces silver per ton, in a quartz gangue; developed by a tunnel on the vein thirty feet in length, and an open cut thirty feet long, with a fifteen-foot face.

**Brittle Silver Mining Company (The).**—Incorporated under the laws of New York, in December, 1881; capital stock $500,000, in



400,000 shares of $125 each, non-assessable; president, Henry O'Neill; vice-president, Benj. R. Western; secretary and treasurer, H. Courteille—all New York City; general manager, Achille Falco, Pitkin; offices 8 Broad street, New York, and Pitkin; owns the Brittle Silver Group, eight claims, 1500x 300 feet each, and the Anna Placer, forty-five acres; situated at the head of Quartz Creek and on Evans Mountain, Quartz Creek district; located in 1880, and one lode patented in 1882; veins all fissures, with crevices from three to seven feet in width, and pay streaks from six to forty-eight inches, containing sulphide of silver and some gold ore, milling, when sorted from the gangue-rock, 159 ounces silver and two ounces gold per ton; developed by six shafts from ten to sixty feet in depth and five tunnels from 20 to 200 feet in length; output ten tons of ore per day.

**Buckeye.**—Wm. Gant and —— Harper, both Crested Butte, Colo., owners; claim 1500x300 feet; situated on Cascade Mountain, Elk Mountain Mining district, nine miles from Crested Butte; located in 1879; vein a fissure, with a crevice five feet wide, and a pay streak eight inches, composed of gray copper, assaying 300 ounces silver per ton, and a quartz gangue; developed by a drift on the vein forty feet in length.

**Beukeye.**—J. J. Donnelly, Gunnison City, owner; claim 1500x300 feet; situated in Cottonwood Gulch, Cochetopa district, five miles from Parlins; located in 1880; vein a fissure, with a crevice four feet wide, containing quartz, galena, and iron and copper, assaying from four to five ounces gold per ton; developed by a shaft eleven feet deep and a tunnel eighteen feet long.

**Buckeye and Augusta.**——H. W. Hitchcock, Gunnison City, and Hudson Burr, Bloomington, Ill., owners; claims 1500x300 feet each; situated on Mineral Mountain, Elk Mountain Mining district, one mile from Schofield; located in 1881; veins both fissures, with mineral streaks from sixteen to eighteen inches wide, containing galena and gray copper, assaying sixty ounces silver per ton, with a quartz gangue; developed by a tunnel 120 feet in length.

**Bunker Hill.**—J. W. Skinner, Irwin, owner; claim 1500x300 feet; situated on Ruby Hill, Ruby district, three-fourths of a mile from Irwin; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak from four to eight inches, containing galena with ruby and native silver, assaying eighty ounces silver per ton, and a quartz gangue; developed by a shaft thirty feet deep.

**Burlington and Ruby Queen.**—T. J. Maloney, Gunnison City, S. S. Metzler, Irwin, and others, owners; claims 1500x300 feet each; situated on Ruby Hill, Ruby district, one mile from Irwin; located in 1880; veins both fissures, with crevices three feet wide, containing quartz and galena with ruby silver and sulphurets, assaying 200 ounces silver per ton; developed by a shaft sixty feet in depth and 150 feet of drifts.

**Capitol Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, June 18, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Chas. D. Gurley, Denver; vice-president, Samuel I. Gill, Gunnison City; secretary and treasurer, Rederick A. Gurley, Denver; office 14 Tabor Block, Denver, Colo.; owns the Capitol, Hub, Fourth of July, and Hunkidori lodes, covering thirty-six acres; situated in Ruby Camp, Ruby district, one mile from Irwin; located in 1879; veins all fissures, with crevices from four to ten feet in width, and pay streaks from six to twelve inches, containing quartz and galena with ruby and native silver, assaying from 20 to 200 ounces silver per ton; developed by 200 feet of drifts on the vein and three shafts from twelve to twenty feet in depth.

**Carbonate King Group.**—H. and A. Schiffer, New York, and L. H. Spilken, Leadville, Colo., and John J. Mastin, Kansas City, Mo., owners; E. H. Hill, Tin Cup, superintendent; group comprises the Carbonate King, Carbonate Queen, and Pine Flat lodes, 1500x300 feet each; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1879; veins all contacts, with crevices from ten to fifty feet wide, and pay streaks from three to six feet, containing iron carbonates in a decomposed gangue, which mill-run, when sorted, from eighteen to sixty ounces silver per ton; developed by a cross-cut sixty feet in length and two shafts thirty-five and thirty-seven feet in depth; output 100 tons.

**Cascade Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Jacob Hoopes, Sterling, Kansas; vice-president, F. M. Hoopes; secretary, E. H. Jefferson; treasurer, H. W. Bushnell; general manager, Thos. M. Skinner—all Crested Butte; owns the Big Elephant, Strike, and Beaconsfield lodes, covering eighteen acres; situated in Baxter Basin and in Poverty Gulch, Elk Mountain district, nine miles from Crested Butte; located in 1880 and 1881; veins all fissures, with crevices from four to nine feet wide, and pay streaks from five to twenty-two inches, containing galena, assaying forty per cent lead and eighty ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five and forty feet in length.

**Central Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, J. M. Schoonmaker, Pittsburgh, Pa.; secretary and treasurer, B. W. Lewis, St. Louis, Mo.; general manager, J. H. McCoy, Gunnison City; offices 217 Olive street, St. Louis, and Gunnison City; owns the Shakespeare and Lucas, situated in Crystal Basin; Laura and Lead Chief, on Meadow Mountain; Santiago, on Bear Mountain; Khedive, on Bellevue Mountain; Carlisle, Rotchford, and Carbonate, on Sheep Mountain—each 1500x300 feet, and all in Elk Mountain Mining district, near Elcho; located from 1878 to 1882, and in process of patent; veins all fissures, with crevices from five to thirty-nine feet in width, and pay streaks from five to thirty inches, containing galena, copper, zinc, and antimonial silver, in a quartz gangue, milling, when sorted, six per cent copper, fifteen per cent zinc, from ten to twenty per cent lead, and from 20 to 100 ounces silver per ton; Laura developed by an eighty-foot tunnel, Carlisle by a sixty-nine-foot tunnel, Santiago by a thirty-nine-foot tunnel, Rotchford by a thirty-foot tunnel, Shakespeare by a sixty-two-foot tunnel, and Lucas by three fifteen-foot shafts; output 500 tons; shipping capacity seventy-five tons per day.

Also owns a concentration-works, erected on a fifteen-acre mill site, situated at Elcho; containing three Bradford Jigs, one Blake Crusher, and one set of Cornish Rolls, run by water-power; capacity forty tons in twenty-four hours; and 320 acres of semi-bituminous coal land, situated at Crested Butte.

**Charley Ross Group.**—A. N. Perrault, H. G. Sutton, and C. A. Knapp, all Tin Cup, Colo., owners; group comprises the following lodes: Charley Ross, Fall City, Fallstaff, Shamrock, Watts, and Julia, 1500x300 feet each; situated on Tin Cup Hill, Tin Cup district; located in 1879; veins all contacts, with crevices from two to six feet wide, containing galena and sulphurets in a quartz gangue; developed by a number of shafts and tunnels about thirty-five feet each.

**Chicago.**—P. E. Robinson, J. E. Taylor, Chas. Oliver, F. W. Ferry, and J. Howard, all Pitkin, Colo., owners; claim 1500x300 feet; situated on the south slope of Gold Ridge, Quartz Creek district, three and one-half miles from Pitkin; located in 1879; vein a fissure, with a crevice three feet wide,



and a pay streak from six to fifteen inches, containing gold-bearing quartz, milling from one to two ounces gold per ton; developed by two tunnels 35 and 140 feet in length and a shaft sixty-five feet in depth; output about seventy-five tons.

**Chipmunk.**—W. P. James, P. Breen, and C. E. Wagner, all Crested Butte, owners; claim 1500x300 feet; situated in Hardscrabble Basin, Elk Mountain district, eight miles from Crested Butte; located in 1880; vein a fissure, with a crevice seven feet wide, containing quartz carrying galena, assaying fifteen per cent lead and thirty-seven ounces silver per ton; developed by a shaft thirty feet in depth.

**Chloride Deposit Group.**—Howard F. Smith and others, Crested Butte, Colo., owners; group comprises the Chloride Deposit, Arab, and Sunset lodes, 1500x300 feet each; situated at the base of Ruby Peak, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; veins all contacts, with crevices from four to forty feet in thickness, and pay streaks from three to forty inches, containing quartz with ruby and brittle silver, assaying from 100 to 500 ounces silver per ton; developed by two shafts twenty and forty feet in depth and two tunnels forty feet each in length.

**Clarendon.**—B. N. Burdick and J. F. Spaulding, both Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, one-half mile from Irwin; located in 1881; vein a fissure, with a crevice four and one-half feet wide, and a pay streak eighteen inches, containing galena and zinc blende, assaying fifty ounces silver per ton, in a quartz gangue; developed by two shafts fifteen and twenty-five feet in depth.

**Clipper and Joplin.**—Chas. W., W. H., and J. S. Rodecker, all Pitkin, owners; claims 1500x300 feet each; situated on Ohio Creek, Quartz Creek district, four miles from Pitkin; located in 1880; veins both fissures, with crevices from two and one-half to six feet in width, containing quartz carrying gold and silver, assaying from one to three ounces gold and ten ounces silver per ton; developed by two shafts twelve and eighteen feet in depth and an open cut thirty-five feet long.

**Cinnamon Mountain Mining and Milling Company (The).**—Incorporated under the laws of Colorado, November 26, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, W. A. H. Loveland; vice-president and general manager, J. K. Hornish; secretary, T. L. Wiswall; treasurer, Edward Reed—all Denver, Colo.; financial agent, W. H. Grenelle, New York City; offices 12 Tabor Block, Denver, and Room 75 No. 115 Broadway, New York; owns the Pacific, No Name, Bonanza, Lone Star, Rock Creek, Golden, and Buckeye, 1500x300 feet each; situated on the east slope of Cinnamon Mountain, Elk Mountain district, one mile from Elko; veins all fissures, with crevices from four to twenty feet in width, and pay streaks from two to thirty-two inches, containing galena and gray copper in a quartz gangue, assaying $30 per ton in gold and from 25 to 125 ounces silver per ton; Pacific developed by one forty-five-foot tunnel, Bonanza by a thirty-foot open cut, Rock Creek by a twenty-foot open cut Golden by a seventy-two-foot tunnel, and Buckeye by a twenty-foot shaft.

**College.**—B. N. Burdick and J. M. Scott, both Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, one-half mile from Irwin; located January 1, 1881; vein a fissure, with a crevice four and one-half feet wide, and a pay streak from six to twenty-two inches, containing galena and copper pyrites with some ruby silver, assaying twenty ounces silver per ton, in a quartz gangue; developed by a shaft forty feet deep.

**Colorado Anthracite Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, James B. Belford, Denver; vice-president, John P. Logan, Philadelphia; secretary, Wm. McKnight; treasurer, F. F. Brinkley; general manager, Geo. W. Cole—all Crested Butte; offices No. 205 Walnut street, Philadelphia, and Crested Butte, Colo.; owns 2,560 acres of coal land; situated on the east and west side of Slate River, between O-Be-Joyful and Poverty Gulches, near Crested Butte; containing three veins of anthracite coal, three, three and one-half, and four feet in thickness, which the Company commenced developing in May, 1882, and on the three-and-one-half-foot vein have driven an entry 125 feet in length, on the three-foot vein an entry 1,000 feet, and on the four-foot vein an entry 150 feet, with some drifting.

**Colorado Coal and Iron Company (The).**—Incorporated under the laws of Colorado; capital stock $10,000,000, in 100,000 shares of $100 each, non-assessable; president, W. J. Palmer, Colorado Springs, Colo.; vice-president, A. H. Danforth, Pueblo; general agent, W. G. Brown, Denver; western secretary, W. L. Graham, South Pueblo; eastern secretary, Walter Hinchman, New York City; local agent, M. Rush Warner, Gunnison City, Colo.; offices McClintock Block, Denver, and Gunnison City, Colo.; owns the Crested Butte Coking-coal Mines, situated at Crested Butte, covering 1,250 acres, underlaid with veins or strata of bituminous coal from three to six feet in thickness; output 30,000 tons, daily shipments 200 tons. In connection with this property the Company has 100 Coke-ovens.

**Columbia Group.**—C. Edwards, Frank T. Frierson, and others, owners; group comprises the Columbia, Billy Patterson, and Hobson's Choice lodes, 1500x150 feet each; situated on Spring Mountain, Spring Creek district; located in 1879 and 1882; vein a contact about twelve feet thick, containing carbonates of lead, assaying from five to fifty ounces silver per ton, in a decomposed gangue; developed by ninety feet of tunnels and eighty-five feet of shafts.

**Comstock.**—S. M. Tucker, Gunnison City, and M. R. Rathbone, Ruby, Colo., E. L. Colburn, H. C. Scribner, D. Scribner and Michael Murray, all Irwin, owners; claim 1500x300 feet; adjoining the Forest Queen lode, Ruby district; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from six inches to two feet, containing ruby silver and arsenical iron, assaying 179 ounces silver per ton, in a quartz gangue; developed by a shaft eighty feet in depth and a tunnel sixty feet long.

**Comstock and Comstock Extension.**—P. E. Robinson, A. Reynolds, William Brothers, Richard Hedgner, and others, all Pitkin, Colo., owners; claims 1500x150 feet each; situated on the east slope of Gold Ridge, Quartz Creek district, three miles from Pitkin; located in 1880; veins both fissures, with crevices about five feet wide, and pay streaks from ten inches to three feet, containing gold-bearing quartz, milling two ounces gold per ton; developed by three shafts, 40, 45, and 160 feet in depth, and a tunnel twenty feet in length; output, 200 tons.

**Comstock and Kent.**—Thomas Lynch,—— Rathbone, and Murray Bros., Irwin, Colo., owners; claims 1500x300 feet each; situated on Ruby Mountain, Ruby district, at Ruby; located in 1880; vein a fissure, with a crevice thirty feet wide, and a pay streak from six to thirty inches, containing galena with ruby silver, assaying 600 ounces silver per ton, in a quartz gangue; developed by two tunnels sixty and seventy feet in length.

**Copper King.**—J. C. H. Grabill, Buena Vista, and J. Jackson and D. S. Critchley, both Cleveland, O., owners; claim 1500x300 feet; situated on a spur of the Continental Divide, in Silverside district, about eight miles from Tin Cup; located in 1881; vein a fissure, with a crevice from three to seven feet in width, containing quartz and galena with copper pyrites, assaying nine per cent copper, three-tenths ounces gold, and thirty ounces silver per ton; developed by two tunnels twenty and sixty feet in length and an open cut twelve feet in length, with twelve-foot face.



**Copper Queen.**—Calvin Warner and Morris Bros., all Tin Cup, owners; claim 1500x300 feet; situated on Rothschild Mountain, Tin Cup district; located in 1880; vein a contact, with a crevice four feet wide, and a pay streak twelve inches, containing lead carbonates, assaying fifty per cent, and twenty-six ounces silverper ton; developed by a shaft twenty-fivefeet in depth.

**Cordelia and St. Bartholomew.**—Wm. G. Chinn, Tin Cup, owner; claims 1500x300 feet each; situated on American Mountain, Tin Cup district, three miles from Tin Cup; located in 1882; veins both contacts, with crevices three feet wide, and pay streaks eighteen inches, containing lead carbonates, assaying from forty to fifty ounces silver per ton; developed by three shafts, ten, fifteen, and thirty-five feet in depth.

**Coos.**—(See Marlow Mining Company.)

**Cramer.**—A. C. Cramer, Crested Butte, owner; claim 1500x300 feet; situated in O-Be-Joyful Basin, Ruby Mining district, three and one-half miles from Ruby; located in 1880; vein a fissure, with a crevice five feet wide, and a mineral streak eleven inches, containing quartz and galena, assaying twenty-nine ounces silver per ton; developed by two shafts eleven and twenty feet in depth.

**Crescent.**—Daniel Donovan and W. H. Taylor, both Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1879; vein a contact, with a crevice four feet wide, containing quartz carrying gold and galena, assaying one-fourth ounce gold and sixteen ounces silver per ton; developed by a shaft sixty feet in depth.

**Croxton-Harper Prospecting and Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, John H. Croxton; secretary, Otis O. Miles; treasurer, Enos Miles—all Denver; owns the Soladad, 1500x300 feet; situated in the Elk Mountain district, one-half mile from Elko, and located in August, 1881; vein a fissure about eight feet wide, containing galena and yellow and gray copper, assaying twelve ounces silver per ton, in a quartz gangue; developed by a twenty-two-foot tunnel.

**Cumberland.**—J. M. Cochran and J. H. Hicks, both Tin Cup, Colo., owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice thirty-eight feet wide, containing magnetic iron and red hematite iron, assaying sixty-four per cent iron, six ounces silver, and two ounces gold per ton, with considerable gangue-matter; developed by an adit and open cut ninety-seven feet in length; output fifty tons.

**Cumberland.**—Jas. B. Johnson, C. M. McAllister, and J. H. Packard, all Pitkin, Colo., owners; claim 1500x300 feet; situated on Cumberland Ridge, Quartz Creek district, three and one-half miles from Pitkin; located in 1879; vein a fissure, with a crevice four and one-half feet wide, containing quartz carrying gold, milling, when sorted, two ounces gold per ton; developed by a shaft sixty-five feet in depth; output fifty tons.

**Cyclops Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, A. J. Babcock; secretary and treasurer, G. S. Fuller; superintendent, G. H. Whitelaw—all Denver, Colo.; offices 42 Opera-house Block, Denver, and Tin Cup, Colo.; owns the Cyclops, 1500x300 feet; situated on Seigel Mountain, Tin Cup district, six and one-half miles from Tin Cup; located in 1879; vein a fissure, with a crevice four feet wide, and a pay streak six inches, containing gold and silver bearing quartz, assaying three and one-half ounces gold and thirty ounces silver per ton; developed by two levels 70 and 120 feet in length.

**Del Ray Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $60,000, in 600 shares of $100 each, non-assessable; president, A. D. Sackett, Roberts, Ill.; secretary, J. B. Meserve, McCook, Neb.; treasurer, W. L. R. Johnson, Buckley, Ill.; general manager, J. G. Fuller, Gunnison City; owns the Windsor, Valley, Glasgow, Iroquois, Pat Dobbin, Sheep Mountain, Spring Creek, and four other lodes, 1500x300 feet each; situated on Spring Creek, Spring Creek district; located in 1881; veins all fissures, with crevices from two to four feet in width, containing quartz and galena, assaying twenty per cent lead and seventy-five ounces silver per ton; developed by six shafts from twenty to sixty feet in depth and four open cuts from ten to thirty feet in length.

**Denver City Group.**—Geo. Fitzgerald, Chas. Deffebough, and James Breimand, all Crested Butte, and Wm. Yule, Gunnison City, owners; group comprises the Denver City, Colorado State, and Early Bird lodes, 1500x300 feet each; situated in Redwell Basin, Ruby district, five miles from Crested Butte; located in 1873; veins all fissures, with crevices from ten to fifty feet in width, containing mineral streaks from six inches to ten feet, composed of quartz, through which is scattered galena and zinc blende, assaying twenty per cent lead and from twenty to forty ounces silver per ton; developed by three tunnels from thirty to sixty feet in length and one ten-foot shaft.

**Diamond.**—S. P. Spencer, W. P. Rose, and others, all Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, two miles from Irwin; located in 1880; vein a fissure, with a crevice four feet wide, containing quartz and galena; developed by an open cut twelve feet long.

**Don Pedro.**—Edgar Virgil and J. D. Lee, both Crested Butte, owners; claim 1500x300 feet; situated on Forest Hill, between O-Be-Joyful Basin and Coal Creek, Elk Mountain district, three miles from Crested Butte; located in 1880; vein a fissure, with a crevice four feet wide, containing quartz with brittle silver, gold, and iron, assaying three-fourths ounce gold and seven ounces silver per ton; developed by a shaft twelve feet in depth and an adit eighteen feet long.

**Douglass.**—T. J. Redmon and E. L. Baker, both Alpine, Colo., owners; claim 1500x300 feet; situated on the south slope of Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1879; vein a contact, with a crevice three feet wide, containing galena and iron pyrites, assaying from twelve to thirty-two ounces silver and from one-fourth to two ounces gold per ton, in a quartz gangue; developed by a drift fifty-seven feet in length and a shaft fifteen feet deep.

**Drew.**—(See Prew.)

**Dunham.**—J. W. Forrest, H. D. Pearsall, Charles Olson, and W. H. Steel, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on east Gold Hill, Tin Cup district; located in 1879; vein a contact varying in width, containing iron and galena; developed by two shafts thirty and thirty-five feet in depth.



**Durango.**—(See Ruby Durango Mining Company.)

**Dwight Chenon Mining Company (The).**—Incorporated under the laws of Illinois; president, Homer A. Kenyon; vice-president, Edward M. Pike; secretary and treasurer, Curtis J. Judd; superintendent, S. Eldridge; offices Dwight, Ill., and Tin Cup, Colo.; owns the Minnie Hall lode, 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1878; vein a contact, with a crevice two feet wide, containing galena, assaying ten per cent lead and five ounces silver per ton, in a quartz gangue; developed by one shaft 175 feet deep.

**Eastern View and Ruby.**—W. P. Rose and Wm. Van Ostern, both Irwin owners; claims 1500x300 feet each; situated in Ruby Basin, Elk Mountain district, three-fourths mile from Irwin; located in 1879; veins both fissures, with crevices from four to six feet in width, and pay streaks from ten to eighteen inches, containing galena with ruby silver in a quartz gangue, milling, when sorted, forty ounces silver per ton; developed by two shafts seventy-five and twenty feet in depth.

**Echo.**—James Beardsley, C. W. Fuller, and J. J. Putney, all Pitkin, owners; claim 1500x300 feet; situated on the south slope of Cumberland Ridge, Quartz Creek district, three miles from Pitkin; located August 7, 1882; vein a fissure, with a crevice three feet wide, containing quartz carrying gold, which assays from two to five ounces gold per ton; developed by one seventy-foot shaft.

**Eighty-one.**—A. M. Stevenson and D. T. Sapp, both Pitkin, Colo., owners; claim 1500x300 feet; situated on Gold Ridge, Quartz Creek district, four miles from Pitkin; located in 1881; vein a fissure, with a crevice seven and one-half feet wide, containing quartz carrying gold, which assays one and one-half ounces gold and three ounces silver per ton; developed by a shaft forty-six feet in depth.

**El Capitan Group.**—D. D. Bliven and Dennis Keyon, both Tin Cup, Colo., and others, owners; group comprises the El Capitan, C. Z., Chelsea, Champion, and Amherst lodes; situated on West Gold Hill, Tin Cup district, three miles from Tin Cup; located in 1878, and C. Z. and Chelsea patented in 1881 and 1882; veins all contacts, with crevices from four to ten feet in width, containing gold-bearing quartz, chlorides, and sulphurets, which mill-run one ounce gold per ton; El Capitan developed by a tunnel 200 feet in length and twelve shafts from ten to thirty feet in depth.

**Elephant Group.**—Louis and Herman Glick, both Crested Butte owners; group comprises the Elephant, University, T. W., and Goodspeed, 1500x300 feet each; situated on Galena Mountain, Elk Mountain district, fifteen miles from Crested Butte; located in 1880; vein a fissure, with a crevice from four to six feet in width, containing quartz and galena, assaying sixty per cent lead and twenty-five ounces silver per ton; developed by seventy feet of inclines and shafts.

**Elk Basin Consolidated Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Eugene K. Stimpson; vice-president, Geo. H. Holt; secretary and treasurer, R. A. Gurley; offices 14 Tabor Block, Denver, Colo.; owns the Chicago, Gray Eagle, Keystone, O. K., Little Fraud, and Slushine lodes, 1500x300 feet each; situated in Elk Basin, Ruby district; located in 1879; veins all fissures, with crevices from three to twelve feet in width, containing galena in a quartz gangue, which assay from sixteen to twenty ounces silver per ton; developed by several shafts from ten to twenty-three feet in depth.

**Elk Mountain Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, January 17, 1880; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president, A. S. Johnson; vice-president, W. W. Gavitt; secretary, Frank Drummond; treasurer, Edwin Scott—all Topeka, Kan.; general manager, M. J. Gray, Crested Butte; offices Topeka and Crested Butte, Colo.; owns the Painter Boy Group, comprising nineteen claims and a tunnel site, covering 200 acres of surface ground; situated at the head of Washington Gulch, Elk Mountain district, six miles from Crested Butte; located in 1876 and 1877, and in process of patent; veins all fissures, with crevices from two to six feet wide, and pay streaks from six to twenty-two inches, containing galena with ruby silver and silver glance in a quartz gangue, milling, when sorted, from 50 to 300 ounces silver per ton; Painter Boy developed by a shaft 100 feet in depth and 300 feet of drifts, and the others by shafts from 10 to 100 feet in depth and tunnels from 25 to 900 feet in length; operated by two fifteen-horse-power engines; output 1,500 tons; daily shipments from five to ten tons.

**Elk Mountain Group.**—Comprising the Elk Mountain, Bonanza, Nellie W., Little Pittsburgh, Forest Queen, Forest King, and Christiana; Randall Morrison, Hugh Kelly, Samuel McMillen, and others, Leadville, owners; claims 1500x300 feet each; situated on Sheep Mountain, Rock Creek district; located in 1880; veins all fissures varying in width, and containing galena in a quartz gangue, milling, when sorted, from 30 to 300 ounces silver per ton; developed by 200 feet of shafts and drifts.

**Elko Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Louis Hutt; vice-president, B. B. Bullwinkle; secretary, Elias P. Read; treasurer, Peter Fish—all Chicago; superintendent, J. W. Goodspeed, Crested Butte; offices 172 East Washington street, Rooms 49 and 50, Chicago, and Crested Butte; owns the Monitor Group, consisting of the Monitor, Mountain Boy, Blue-bell, Peter Fish, and E. P. Read lodes, 1500x300 feet each; situated on Slate River, Elk Mountain district, ten miles from Crested Butte; veins all fissures, with crevices from four to ten feet in width, and pay streaks from two to eighteen inches, containing galena and iron pyrites, assaying from twenty-one to fifty ounces silver per ton, in a quartz gangue; developed by several open cuts and a tunnel opening up the vein for several hundred feet.

**Emma.**—Joseph F. Barnes and S. R. Royster, both Crested Butte, Colo., owners; claim 1500x300 feet; situated on Mineral Mountain, Elk Mountain district, ten miles from Crested Butte; located July 23, 1880; vein a fissure, with a crevice fourteen feet wide, and a pay streak six inches, containing gray copper, galena, and bromides of copper, assaying 114 ounces silver per ton, in a quartz gangue; developed by an open cut twenty feet in length and a tunnel from the open cut ninety feet long.

**Eureka.**—J. W. Forrest, F. Wolfe, and H. D. Pearsall, all Tin Cup, owners; claim 1500x300 feet; situated on East Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1880; vein a contact, with a crevice five feet wide, containing quartz and iron, assaying from five to twenty-five ounces silver per ton; developed by a shaft forty-two feet deep.

**Eureka.**—Pat Breen, W. P. James, and C. E. Wager, all Crested Butte, Colo., owners; claim 1500x300 feet; situated in O-Be-Joyful Basin, Ruby district, five miles from Crested Butte; located in 1880; vein a fissure, with a crevice from three to four feet in width and a pay streak seven inches wide, containing galena, assaying fifteen per cent lead and seventy-two ounces silver per ton; developed by a tunnel thirty feet long.



**Eureka Gold and Silver Mining Company.**—Owns a tunnel site 3000x6 feet; situated on Granite Mountain, Tin Cup district; on which a tunnel is being driven to cut the veins in the Rover, Katie, Quinn, Pride of Newton, Venus, St. Julien, Cliff, and other claims.

**Excelsior.**—Lauren T. Baxter, Crested Butte, owner; claim 1500x300 feet; situated in Baxter Basin, Elk Mountain district, eleven miles from Crested Butte; located in 1879; vein a fissure, with a pay streak from eight to sixteen inches wide, containing galena, gray copper, and brittle silver, in a quartz gangue, which mill-runs, when sorted, twenty per cent lead and ninety ounces silver per ton; developed by two adits thirty and forty feet in length and ten small shafts; output twenty tons.

**Exchequer Prospecting and Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, J. W. Rockfeller; vice-president, W. A. Clark; secretary and manager, J. J. Donnelly—all Gunnison City; treasurer, W. H. Mellen, Garnett, Kansas; offices Gunnison City; owns the Exchequer and Comptroller lodes, 1500x300 feet each; situated in Cochetopa and Cottonwood Gulches, Cochetopa Mining district, five miles from Parlins; veins both fissures four and one-half feet in width, containing quartz and iron pyrites, assaying from one and one-half to ten ounces gold per ton; developed by two shafts twenty and seventy feet in depth.

**Fairview.**—Nathaniel Slaght, Greenville, Mich., owner; Aaron Slaght, Pitkin, manager; claim 1500x300 feet; situated on the south-west slope of Fairview Mountain, Quartz Creek Mining district, four and one-half miles from Pitkin; located in 1878, and patented in October, 1882; vein a contact, with a crevice five feet wide, and a pay streak from six inches to three feet, containing copper carbonates, black sulphurets, and galena in a decomposed gangue, which mill-runs, when sorted, sixty ounces silver per ton; developed by three shafts, forty-five, fifty-five, and eighty-five feet in depth, a level from the eighty-five-foot shaft 135 feet in length, an incline 100 feet long, and 150 feet of drifts; output 400 tons.

**Field's Group.**—B. F. Field, Irwin, owner; group comprises the William Henry, King of the Valley, Clinton, Vanderbilt, and No. 7., 1500 x300 feet each; situated in Elk Basin, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; veins all fissures, with crevices from one and one-half to ten feet in width, and pay streaks from ten inches to three feet wide, containing galena and copper pyrites, which mill-run, when sorted from the gangue-rock, forty ounces silver per ton; developed by four shafts from thirty-five to sixty feet in depth; output eighty tons.

**Fireside Group.**—Philip Peters, James Kyle, and J. C. Brown, all Gunnison City, and F. Hartwell, Canon City, owners; group comprises the Fireside, Little Jakie, White Cloud, Mollie Van, and Josie B. lodes, 1500x300 feet each; Fireside adjoining the Lead Chief mine, in Ruby Basin, and the others lie in Peeler Basin, Ruby Mining district; located in 1879 and 1880; veins all fissures, with crevices from five to six feet in width, containing quartz interspersed with galena and some ruby silver, which, when sorted, assay from 40 to 200 ounces silver per ton; developments consist of assessment shafts.

**Flag-staff.**—Frank Cartwright & Co., Denver, Colo., owners; claim 1500x300 feet; situated on American Mountain, Tin Cup district, three miles from Tin Cup; located in 1881; vein a contact, with a crevice five feet wide, and a pay streak from three to thirty-two inches, containing hard carbonates and hematite iron, assaying one ounce gold and sixty ounces silver per ton; developed by a shaft sixty-five feet in depth.

**Florence F.**—1500x300 feet; situated on American Mountain, Tin Cup district; vein a fissure two feet wide, containing galena in a lime-shale gangue, assaying sixty per cent lead and forty ounces silver per ton.

**Forest Grove.**—R. L. Cochran, M. McGowan, and W. J. Shearer, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Rothschild Mountain, Tin Cup district, one-half mile from Tin Cup; located in 1879; vein a contact, with a crevice two feet wide, containing galena, assaying fifty per cent lead and ninety ounces silver per ton, in a quartz gangue; developed by a shaft fifty feet in depth.

**Forest Queen Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1879; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, J. W. Palmer; vice-president, R. W. Woodbury; secretary, B. F. Woodward; treasurer, D. C. Dodge—all Denver; superintendent, Ira Brown, Irwin; offices *Times* Building, Denver, and Irwin; owns the Forest Queen lode, 1000x265 feet; situated at Irwin, Ruby district; located in 1879, and in process of patent; vein a fissure, with a crevice twenty-two feet wide, and a pay streak from two to four feet, containing pockets of ruby, native, and brittle silver, and arsenical iron, in a quartz gangue, which mill-runs, when sorted, 250 ounces silver per ton; developed by a tunnel 600 feet in length, 300 feet of drifts, and a shaft connecting with the tunnel 180 feet in depth, with drifts running therefrom aggregating 150 feet; output 1,200 tons.

**Fort McHenry.**—T. F. and P. H. O'Brien and Wm. O. Russell, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on American Mountain, Tin Cup district; located in 1882; vein a contact, with a crevice three feet wide, and a pay streak fifteen inches, containing galena and copper, assaying forty per cent lead and thirty ounces silver per ton, in a quartz gangue; developed by a forty-foot shaft.

**Four-Ace Group.**—J. K. Robinson, Crested Butte, S. F. Parish, Colorado Springs, and the Algonquin Mining Company (Colorado), owners; group comprises the Four-Ace, American Flag, and Titusville lodes, 1500x300 feet each; situated on Rock Creek and Galena Mountain, Elk Mountain district, one mile from Elko; located in 1878 and 1879; veins all fissures, with crevices from two to twelve feet in width, and pay streaks from four to thirty inches, containing quartz, galena, and copper, in a quartz gangue, which mill-run, when sorted, twenty per cent lead and forty-five ounces silver per ton; developed by a shaft fifty feet in depth and two open cuts fifteen and thirty-five feet in length.

**Free America.**—Frank Cartwright, Denver, owner; claim 1500x 300 feet; situated on American Mountain, Tin Cup district, three and one-fourth miles from Tin Cup; located in 1881; vein a contact, with a crevice eighteen inches wide, containing quartz and iron carbonates, assaying sixty ounces silver per ton; developed by a shaft twenty feet in depth.

**Free America Group.**—James E. McGee, Alexander Greer, and L. Halsath, all Crested Butte, owners; group comprises the Free America and Bonnie Kate, 1500x300 feet each; situated in Redwell Basin, Elk Mountain Mining district, four miles from Crested Butte; located in 1880; veins both fissures, with mineral streaks six and eighteen inches wide, containing galena, assaying from 69 to 150 ounces silver per ton; developed by a tunnel 130 feet in length.

**G. Z.**—Joseph Taylor, John Kinkaid, and G. H. Whitelaw, all Tin Cup, owners; claim 900x300 feet; situated on Gold Hill, Tin Cup district; located



in 1878; vein a contact, with a crevice four feet wide, and a pay streak eighteen inches, containing carbonates, galena, and sulphurets, assaying fifteen per cent lead and sixty ounces silver ton, in a decomposed gangue; developed by a shaft seventy-five feet in depth and a level 100 feet in length.

**Gail Borden.**—Charles Heyewald, John Pritchett, Geo. L. Camp, Wm. H. Hunt, and Thomas M. Ryan, all Tin Cup, owners; claim 1500x300 feet; situated on Union Hill, Tin Cup district, three miles north-east of Tin Cup; vein a contact, with a crevice twenty-two feet wide, and a pay streak from six to thirty inches, containing iron and copper pyrites and copper glance, assaying twelve and one-half per cent copper, $19 in gold, and twelve ounces silver per ton, in a quartz gangue; developed by a cross-cut tunnel 105 feet in length and a drift on the vein fifty-six feet long.

**Galena Gulch Mining Company (The).**—Owns the North Star, Muldoon, and No. 3, 1500x300 feet each, and the Narrow Gauge, 1500x52 feet, parallel claims; situated on Galena Gulch, Tin Cup district; veins all contacts, in the North Star between granite and lime, and about fifteen feet wide, containing mineral as follows: ten feet of iron ore in a quartz gangue and four feet of galena in a lime gangue, as shown by a twenty-foot shaft, and a body of copper carbonates in the 115-foot shaft; in the Muldoon a granite and lime contact four feet wide, containing iron and manganese, with some copper, in a lime-rock gangue; in No. 3 a lime contact, three feet in width, of soft carbonate in decomposed lime, and six inches of galena; and in the Narrow Gauge similar characteristics to the Muldoon, as shown by a shaft of considerable depth, during the progress of which work some shipments have been made, milling, when sorted, from $25 to $50 per ton.

**George D. Roberts.**—J. W. Forrest, O. F. Wolfe, and H. D. Pearsall, all Tin Cup, owners; claim 1500x300 feet; situated on East Gold Hill, Tin Cup district; located in 1880; vein a contact, with a crevice from three to six feet in width, containing hematite iron carrying gold and silver, which mill-runs, when sorted from the gangue-rock, forty per cent iron and from $12 to $20 in gold and silver per ton; developed by a tunnel on the vein 128 feet in length; output 275 tons.

**Gillett.**—W. I. Gillett, H. S. Sherman, T. O. Walker, and Benj. Swartz & Co., all Tin Cup, owners; claim 1500x300 feet; situated on South Gold Hill, Tin Cup district; vein a contact four feet wide, containing a low-grade silver ore; developed by a shaft thirty-five feet in depth.

**Gilpin County Mining Company.**—(Unincorported); composed of A. M. Jones, Denver, W. T. Newell, S. V. Newell, and John Johnson, P. C. Hanson, Central City, Colo.; A. M. Jones, general manager; owns and operates a stamp-mill containing ten stamps; situated on Quartz Creek, near Pitkin; capacity nine tons per day.

**Glasgow.**—C. W. Honaker, Gunnison City, owner; claim 1500x300 feet; situated in the Cochetopa district, fourteen miles from Gunnison City and four miles from Parlins; located in 1880; vein a fissure, with a crevice fifteen feet wide, and a pay streak from six to twenty-two inches, containing decomposed quartz carrying gold and copper, which mill-runs three-tenths ounce gold and ten ounces silver per ton; developments—a series of open-cuts, opening up the vein for a distance of 500 feet; output 150 tons on the dumps.

**Gold Cup Mining and Smelting Company (The).**—Incorporated under the laws of New York, October 4, 1881; capital stock $500,000, in 500,000 shares of $1.00 each, non-assessable; president, Amèdeè Vatable; vice-president, Emile Vatable; secretary and treasurer, George W.

Crane—all of New York; general manager, Thomas G. Hall, Tin Cup; offices, 89 Water street, New York City, and Tin Cup, Colo.; owns the Gold Cup, Silver Cup, Little Gold Cup, and Addie lodes, 1500x300 feet each; situated on Gold Hill, Tin Cup district; located in 1878, and patened; veins all fissures, averaging four feet in width, containing galena, sulphurets, chlorides, and carbonates, carrying gold and silver, milling, when sorted from the gangue-matter, from $50 to $150 per ton; developed by 2,000 feet of tunnels, with considerable drifting and some stoping; improvements—steam machinery, with the necessary buildings; property is making regular shipments.

**Gold Leaf.**—E. E. Root, Pitkin, Colo., owner; claim 1500x300 feet; situated on the south slope of Gold Ridge, Quartz Creek district, four miles from Pitkin; located in 1879; vein a fissure, with a mineral streak from six inches to three feet wide, containing gold-bearing quartz, which assays three ounces gold per ton; developed by three shafts, nineteen, twenty-eight, and thirty-five feet in depth, and tunnel 127 feet long.

**Gold Monument.**—J. G. Simpson, J. B. Johnson, and J. S. Sharp, all Pitkin, Colo., owner; claim 1500x300 feet; situated on German Flats, Quartz Creek district, four miles from Pitkin; located in 1881; vein a fissure, with a crevice three and one-half feet wide, containing gold-bearing quartz, which mill-runs one and one-half ounces gold per ton; developed by a shaft ninety-five feet deep.

**Golden City.**—Louis and Herman Glick, both Crested Butte, E. W. Fuller, Gunnison City, and Wm. Hill and O. G. McGlancy, both Gothic, owners; claim 1500x300 feet; situated on Copper Creek, Elk Mountain district, three miles from Gothic; located in 1879; vein a fissure, with a crevice four feet wide, containing galena in a quartz gangue, assaying seventy ounces silver per ton; developed by a tunnel 150 feet in length.

**Golden Curry.**—John Curry, E. E. Root, and L. D. Wilson, all Pitkin, owners; claim 1500x300 feet; situated on the north slope of Gold Hill, Quartz Creek district, three and one-half miles from Pitkin; located in 1879; vein a fissure, with a crevice four feet wide, and a pay streak from six inches to three feet, containing gold-bearing quartz which assays two ounces gold per ton; developed by a shaft sixty feet in depth.

**Golden Gate.**—W. T. Jones and Henry Mounts, Pitkin, owners; claim 1500x300 feet; situated on the west slope of Cumberland Ridge, Quartz Creek district, three and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice five feet wide, and a pay streak from six to thirty inches, containing gold-bearing quartz, assaying two and one-half ounces gold per ton; developed by a shaft sixty feet in depth.

**Golden Chariot.**—J. W. Forrest, H. D. Pearsall, and Charles Olson, all Tin Cup, owners; claim 1500x300 feet; situated on East Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1880; vein a contact, with a crevice four feet wide, containing iron manganese, assaying four ounces silver per ton; developed by a shaft sixty feet deep.

**Goldfinch Group.**—John Dempsey and A. H. Jackson, both Pitkin, owners; group comprises the Goldfinch, Gold Eagle, Forester, Argo, and one other claim, 1500x150 feet each; situated in Union Park, Tin Cup district, eight miles from Pitkin; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak thirteen inches, containing gold-bearing quartz, assaying two and one-half ounces gold per ton; developed by a number of shafts from ten to twenty feet deep.



**Good Luck.**—H. H. Bruner, M. G. Walker, Lewis Walker, L. J. Edwards, and others, Buena Vista, Colo., owners; claim 1500x300 feet; situated near Grizzly Peak, Silver Cliff district, thirty-five miles from Buena Vista; located in 1882; vein a fissure, with a crevice four feet wide, containing galena in a quartz gangue; developed by a shaft fifteen feet in depth.

**Governor St. John.**—R. H. Kyte, J. W. Champion, H. Fellows and P. B. Mainwaring, all Pitkin, owners; claim 1500x300 feet; situated on the south-west slope of Green Mountain, Quartz Creek district, five miles from Pitkin; located in 1880; vein a contact, with a crevice twenty feet wide, and a pay streak forty inches, containing galena, gray copper, brittle silver, carbonates of copper, sulphurets, and chlorides, assaying 700 ounces silver per ton, in a quartz gangue; developed by a shaft 100 feet in depth and a drift seventy-five feet in length; output seventy-five tons.

**Grand Duke.**—A. N. Perrault, C. A. Knapp, and H. G. Sutton, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1867; vein a contact, with a crevice two feet wide, and a pay streak twelve inches, containing galena and black sulphurets, assaying eighty ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five and forty feet in length.

**Grand Republic and Leadville.**—Paul Roche, Gunnison City, and John Birmingham, Georgetown, owners; claims 1500x300 feet each; situated on Sheep Mountain, Elk Mountain district, three miles from Scofield; located in 1880; veins both fissures, with crevices about five feet in width, containing galena and copper, which assay 300 ounces silver per ton, in a quartz gangue; developed by a shaft fifty feet in depth and a tunnel fifty feet in length.

**Great American Group.**—Anthony Oates, James McCourt, and David Jones, all Gothic, owners; group comprises the Cleopatra, Robbie Burns, Silver Wave, and Silver Cord lodes, 1500x300 feet each; situated on Brush Creek, Elk Mountain district, twelve miles from Crested Butte; located in 1880; veins all fissures, with crevices from two to five feet wide, containing quartz carrying galena, which assay from 30 to 300 ounces silver per ton; developed by three tunnels, fifteen, twenty-five, and forty-five feet in length.

**Great Republic Silver Mining Company (The).**—Incorporated under the laws of Maryland in August, 1881; capital stock $1,500,000, in 300,000 shares of $5 each, non-assessable; president, Frank Lee Wells; secretary, Henry M. Wilson; treasurer, Seth H. Whitley—all Baltimore, Md.; general manager, W. P. Rose, Irwin; offices 55 Second street, Baltimore, and Irwin; owns the Great Republican lode, 1500x300 feet; situated in O-Be-Joyful Basin, Ruby district, three miles from Irwin; located in 1880; vein a fissure, with a crevice ten feet wide, and a pay streak from eight to twelve inches, containing galena, assaying from twenty-six to seventy ounces silver per ton, in a quartz gangue; developed by a shaft twenty feet in depth and a tunnel forty-five feet in length.

**Great Western.**—John Jennings, John Shields, and Geo. W. Shaw, all Cañon City, and Louis Franke, Grand Junction, owners; claim 1500x300 feet; situated on Copper Creek, Elk Mountain district, five miles from Gothic; vein a fissure, with a crevice four feet wide, and a pay streak two and one-half feet, containing chlorides with ruby and wire silver, assaying 500 ounces silver per ton, in a quartz gangue; developed by a shaft ninety-five feet in depth.

**Green Lake.**—J. C. Morgan, Joseph Block, Edward Johnson, and others, all Ruby, owners; claim 1500x300 feet; situated on Ruby Peak, Ruby

district, two and one-half miles from Irwin; located in 1879; vein a fissure, with a crevice three and one-half feet wide, containing quartz and galena, assaying thirty-five ounces silver per ton; developed by a shaft thirty feet in depth.

**Green Mountain Milling and Mining Company (The).**—Incorporated under the laws of Colorado, June 28, 1880; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, Nathaniel Slaght; secretary and treasurer, Aaron Slaght, both Greenwell, Mich.; general manager, Aaron Slaght; office Pitkin; owns the Green Mountain, Bluebird, Linda, Belle, Rosa, and Nathaniel Slaght lodes, 1500x300 feet each; situated on Green Mountain, Quartz Creek district, eight miles from Pitkin; located in 1880, and patented in 1882; veins all fissures, with crevices from two to six feet in width, and pay streaks from three to twenty-two inches, containing quartz and galena with gray copper, assaying fifty ounces silver per ton; developed by a tunnel fifty feet in length and several shafts from ten to twenty feet in depth.

**Greenhorn and Little Nellie.**—Thos. F. and P. H. O'Brien and Wm. O. Russell, all Tin Cup, Colo., owners; claims 1500x300 feet each; situated on American Mountain, Tin Cup district; located in 1880; vein a contact, with a crevice seven feet wide, and a pay streak from four to thirty inches, containing galena, chlorides of silver, and oxides of copper, assaying twenty-five per cent copper and forty ounces silver per ton, in a quartz gangue; developed by two shafts seventy and eighty feet in depth.

**Gunnison Coal Company (The).**—Incorporated under the laws of New York in January, 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, W. B. Sterrett; secretary and treasurer, D. F. Verdinal—both New York City; general manager, C. T. Sills, Gunnison City; offices 39 Broadway, New York, and Gunnison City; owns 3,520 acres of coal land; situated on Ohio Creek, fifteen miles from Gunnison City; located in 1880; containing two veins, or strata, of bituminous coal six and nine feet in thickness; developed by three entries from 150 to 300 feet in length and two air-shafts 150 and 200 feet in depth, with 5 rooms; worked by one fifteen-horse-power engine; output 3,000 tons, and daily shipments 100 tons. (The Gunnison Improvement Company owns an interest in 2,620 acres of this property.)

**Gunnison Crushing and Sampling Works.**—W. Rose, S. A. Reed, and G. N. Williamson, all Irwin, Colo., owners; works established in 1880; situated at Irwin; main building (frame) 65x60 feet, and containing Blake Crusher, Cornish Rolls, and complete sampling machinery; motive power supplied by a forty-horse-power engine; capacity fifty tons in twenty-four hours. This Company also purchases ore for shipment.

**Gunnison Improvement Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; vice-president and acting-president, F. T. Bond; secretary, J. S. M. Duffield; treasurer, David K. Johnson—all Philadelphia, Pa.; general manager, C. T. Sells, Gunnison City; offices 202 Walnut Place, Philadelphia, Pa., and Gunnison City, Colo.; owns three-fourths of Maple-leaf, one-third Little Nellie, and three-fourths Accidental lodes, 1500x300 feet each, and one-half John Harley and Gault Placers, covering seventy acres (the remainining interests being owned by J. Hartman, Gunnison City), and a town site forty acres; situated twelve miles from Gunnison City, and four miles from Parlins, Cochietopa district; located in 1880; the lodes are all developed by three tunnels ranging from twenty-five to eighty feet in length, and two shafts twenty and thirty feet in depth; also owns four-tenths in 2,620 acres of coal land held by Gunnison Coal Company.



**Gunnison Valley Mining Company (The).**—Incorporated under the laws of New York, in 1879; superintendent, C. W. Watson, Gothic, and Crested Butte; owns the Dudley, Morning Star, Champion, Cliff, and three other lodes, 1500x300 feet; situated on Rock Creek, Elk Mountain district, three miles from Gothic; located in 1879, and patented in 1880; veins all fissures varying in width, and containing galena and copper in a quartz gangue; developed by two tunnels 90 and 160 feet in length.

**Hancock.**—1500x300 feet; situated on Anna Mountain, Tin Cup district; vein a fissure in porphyritic granite, containing galena impregnated with black sulphurets and brittle silver, assaying from 25 to 150 ounces silver per ton, in a porphyry gangue.

**Happy Case.**—Seace L. Maultby and Patrick Daily, both Crested Butte, owners; claim 1500x300 feet; situated in Redwell Basin, Elk Mountain district, four miles from Crested Butte; located in 1880; vein a fissure, with a crevice three feet wide, and a pay streak from six to eighteen inches, containing galena, assaying 100 ounces silver per ton, in a quartz gangue; developed by a tunnel 140 feet long.

**Hawkeye Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $600,000, in 12,000 shares of $50 each, non-assessable; president, Robert Law; secretary and treasurer, Henry H. Law—both Chicago; general manager, S. C. Robinson, Pittsburgh, Colo.; offices 126 Market street, Chicago, Ill., and at mines; owns the Hawkeye Group, comprising the Hawkeye, Hawkeye East, Hawkeye West, Hawkeye North, Hawkeye North-west, Grand View, and Alpha lodes, 1500x300 feet each; situated on Hawkeye Mountain, Elk Mountain district, one-fourth of a mile from Pittsburgh, and six miles from Crested Butte; located in 1881; veins all fissures, with crevices from four to six feet in width, and pay streaks about fifteen inches, containing galena with brittle silver and zinc blende in a quartz gangue, milling, when sorted, 115 ounces silver and one-tenth ounce gold per ton; Hawkeye West developed by two tunnels 30 and 140 feet in length, Grand View by an adit on the vein ten feet long, Alpha by a cross-cut thirty feet in length; output fifty tons, with a capacity for producing ten tons per day.

**Hercules.**—Wm. Cheney, John McAnerney, and Thos. Keegan, all Crested Butte, Colo., owners; claim 1500x300 feet; situated on Slate Creek, Elk Mountain district, one-fourth mile from Pittsburgh; located in 1882; vein a fissure, with a crevice four feet wide, containing quartz and galena, assaying from twenty to fifty ounces silver per ton; developed by a tunnel sixty-three feet long.

**Hidden Treasury.**—A. N. Perrault, H. G. Knapp, and C. A. Knapp, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice three feet wide, and a pay streak from six to twenty inches, containing galena and sulphurets, assaying from forty to fifty ounces silver per ton, in a quartz gangue; developed by a shaft forty-five feet deep.

**Highland Mary and Great Eastern.**—Chris and Peter Stoler and P. H. Decker, owners, the latter only owning in the Highland Mary lode; claims 1500x300 feet each; situated at the head of Quartz Creek, Quartz Creek district, ten miles from Pitkin; located in 1880 and 1881; veins all fissures, with crevices from three to eight feet in width, and pay streaks from six to thirty inches, containing quartz and galena, assaying from 40 to 140 ounces silver per ton; developed by a tunnel 115 feet in length and an open cut twenty-five feet in length, with a fifteen-foot face.

**High Muck-a-muck.**—1500x300 feet; situated at the extreme head of Quartz Creek, near the Brittle Silver lode; vein a fissure, varying in width, containing a cellular quartz carrying silver sulphides, with decomposed iron pyrites, assaying from 50 to 150 ounces silver per ton; developed by a tunnel of some considerable length.

**Hindoo Prince.**—G. W. Monroe, Chris. Stoler, and W. M. Blake, all Pitkin, Colo., owners; claim 1500x300 feet; situated on Boulder Creek, Quartz Creek district, eight miles from Pitkin; located in 1882; vein a fissure, with a crevice four feet wide, containing quartz and galena, assaying eighty ounces silver per ton; developed by a tunnel twelve feet in length.

**Home-stretch.**—E. W. Shearer and J. S. McCullough, both Crested Butte, Colo., owners; claim 1500x300 feet; situated in Dark Cañon, Elk Mountain district, ten miles from Crested Butte; located in 1879; vein a fissure, with a crevice twelve feet wide, and a pay streak from six to thirty inches, containing galena, gray copper, and black sulphurets, in a quartz gangue, which mill-run, when sorted, eighteen per cent lead and ninety-six ounces silver per ton; developed by a tunnel thirty-seven feet in length; output 120 tons.

**Howard.**—(Extension of Old Sheik); Howard F. Smith and C. S. Robinson, both Crested Butte, owners; bonded and leased to Harold and Lee Thompson, F. W. Fuller, and J. Presley, all Irwin, until November 1, 1883; claim 1500x300 feet; situated at the upper end of Buby Basin, Ruby district, one and one-fourth miles from Irwin; located in 1879; vein a fissure, with a crevice twelve feet wide, containing quartz carrying native, ruby, and brittle silver, which mill-runs, when sorted, 200 ounces silver per ton; developed by a shaft 100 feet in depth and a tunnel 200 feet in length; output fifty tons.

**Humboldt.**—John Curry and Geo. A. Hynes, both Pitkin, Colo., owners; claim 1500x300 feet; situated on Gold Ridge, Quartz Creek district, four miles from Pitkin; located in 1879; vein a fissure, with a crevice two feet wide, containing quartz carrying gold, which assays one and one-half ounces gold per ton; developed by a shaft forty-five feet in depth.

**Hunkidori and Eureka.**—James Donovan, S. Carmichael, S. Gallagher, and W. Parker, all Tin Cup, owners; claims 1500x300 feet each; situated on Gold Hill, Tin Cup district, three miles from Tin Cup; located in 1881; vein a contact, with a crevice four feet wide, and a pay streak from three to eighteen inches containing lead carbonates, assaying fifty ounces silver per ton, with a decomposed gangue; developed by two shafts sixty-five and seventy feet in depth.

**Iris.**—D. M. Watson and —— Kniel, both Pitkin, owners; claim 1500x300 feet; situated on Green Mountain, near the Governor St. John mine, Quartz Creek district, six miles from Pitkin; located in 1880; vein a contact, containing twelve inches in width of galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by a shaft twenty-five feet in depth.

**Iron Bonnet Silver Mining Company (The).**—Owns the Iron Bonnet, Excelsior, and Albino lodes, 300x1500 feet each; situated on Gold Hill, north of the M. C. R. R. lode, Tin Cup district, about four miles from Tin Cup; veins all fissures bedded in limestone, and varying in width from one to four feet, containing copper carbonates, chlorides, and sulphides, in a lime gangue, milling, when sorted, from $50 to $150 per ton, with a vein-matter of lime-rock and porphyry; developments about 300 feet of work.



**Iron Cap.**—1500x300 feet; situated at the foot of the Silver Islet Range, Quartz Creek district, one-half mile from Pitkin; vein a contact, varying in width, and containing galena and iron, but of a rather low grade; developments—one tunnel 150 feet long, with some other workings.

**Iron Duke.**—L. S. Harding, Irwin, and Thomas Williams, Denver, owners; claim 1500x300 feet; situated in Silver Queen Basin, Elk Mountain district, three miles from Gothic; located in 1880; vein a fissure, with a crevice from six to ten feet wide, and a pay streak from six to twenty inches, containing galena with ruby and wire silver, assaying 500 ounces silver per ton, in a quartz gangue; developed by a shaft 130 feet in depth.

**Iron Horse.**—John Abbett and John Lynch, both Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, twenty-four miles from Buena Vista; located in 1882; vein a fissure, with a crevice twenty feet wide, and a pay streak from four to forty inches, containing quartz, galena, and gray copper, assaying 120 ounces silver per ton; developed by a shaft ten feet in depth.

**Iron King, Hiram, and Montana Placers.**—B. C. Gray, W. W. McDonnell, and N. Balock, all Tin Cup, owners; claims cover thirty acres; situated in Bertha Gulch, Tin Cup Mining district, two miles from Tin Cup; located in 1879; developed by 600 feet of fluming and one-half mile of ditching.

**Iron Mask.**—R. L. Cochran, H. R. Morris, and T. S. M. Rhett, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1881; vein a contact eighteen inches wide, containing silver-bearing quartz, which assays from ten to fifty ounces silver per ton; developed by a shaft fifty feet in depth.

**Italian Boy.**—John Lynch, A. H. Wade, C. B. Wilson, and J. E. Cole, all Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, thirty miles from Buena Vista; located in 1882; vein a fissure, with a crevice four feet wide, containing quartz carrying some galena and gray copper; developed by a shaft fifteen feet in depth.

**Jackson City.**—A. N. Perrault, H. G. Sutton, and C. A. Knapp, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Rothschild Mountain, Tin Cup district; located in 1879; vein a fissure, with a crevice four feet wide, containing quartz carrying gold and galena, assaying $16 in gold and fifty ounces silver per ton; developed by a shaft thirty-five feet in depth.

**Jacky C.**—C. W. Cornell, Irwin, Colo., and N. R. Cornell, Knoxville, Iowa, owners; claim 1500x300 feet; situated on Bald Mountain, Ruby district; located in 1880; vein a fissure, with a crevice five feet wide, and a pay streak from two to twelve inches, containing quartz carrying ruby silver and chlorides, assaying two ounces gold and fifty ounces silver per ton; developed by a tunnel on the vein twenty feet long.

**Jacob Stradder and Gem.**—Richard McLeod, John Trimble, and Fred. Pfifer, all Crested Butte, owners; claims 1500x300 feet each; situated at the head of Baxter Basin, Elk Mountain district, eight miles from Crested Butte; located in 1879; veins all fissures, with crevices four feet wide, and pay streaks from six to twenty inches, containing galena with silver glance and sylvanite, assaying from 60 to 210 ounces silver per ton, in a quartz gangue; developed by two drifts on the vein forty feet in length each and a tunnel on the vein 106 feet in length.

**Jefferson Coal Bank.**—E. H. Jefferson, Crested Butte, owner; claim covers 160 acres; situated on the south side of Crested Butte; containing five veins of bituminous and free-coking coal, varying in thickness from three to ten feet; developed by two entries 113 and 500 feet in length; output 3,000 tons.

**Jenny B. Lee.**—S. S. Chapman and others, 16 Lake street, Chicago, Ill., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district; located in 1879; vein a contact, with a crevice from three to four feet wide, and a pay streak from three to twelve inches, containing galena and chlorides, assaying from $50 to $100 per ton, in a quartz gangue; developed by a shaft fifty feet in depth.

**Jessie B.**—Sperry Bros., Garfield, Colo., owners; claim 1500x300 feet; situated in the Tomichi district; located in 1881; vein a fissure, varying in width, containing oxide of iron carrying gold, which assays $2.50 in gold and $10 in silver per ton; developed by a tunnel thirty feet long.

**Jim Fisk.**—1500x300 feet; situated on Anna Mountain, Tin Cup district; vein a fissure in porphyritic granite, from two to four feet wide, containing galena impregnated with black sulphuretes and brittle silver, assaying from 20 to 150 ounces silver per ton, in a porphyry gangue.

**Jimmy Mack Group.**—E. C. Stoddard, E. R. Stephens, and S. S. Chapman, all Tin Cup, owners; group comprises the Jimmy Mack, M. C. R. R., Dwight, Flora, and S. S. Chapman lodes, 1500x300 feet each; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1878 and 1879; veins all contacts, with crevices from three to four feet wide, composed of carbonates of iron, galena, chlorides, and sulphurets, which mill-run, when sorted from the gangue-rock, 100 ounces silver per ton; developed by an incline shaft 200 feet, other shafts aggregating 725 feet, three levels aggregating 550 feet; output $75,000 to $100,000.

**John Henry Group.**—V. C. Anderson, Geo. W. Andrews, and David Scott, all Crested Butte, F. S. Gage and Frank Lockard, Kansas, and others, owners; group comprises the John Henry, Snow Mass, Black Forest, Emma, Trigger, and D. & R. G. lodes, 1500x300 feet each; situated on Mineral Mountain, Elk Mountain district, at Snow Mass; located in 1880 and 1881; veins all fissures, with crevices from two to seven feet wide, and pay streaks from six inches to four feet, containing galena and gray copper with some native silver in a quartz gangue, which mill-run, when sorted, twenty-three ounces silver per ton; developed by four tunnels from ten to fifty feet in length and five shafts from ten to thirty feet in depth.

**Josephine.**—John H. North and Chas. Riggins, both Kansas City Mo., owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1879, and patented; vein a contact, with a crevice fifteen feet wide, and a pay streak from six to thirty inches, containing carbonates of iron, milling, when sorted from the gangue-matter, from twelve to twenty-five ounces silver per ton; developed by a tunnel seventy feet in length and a shaft eighty-five feet in depth.

**Julia Harper and My Boy Group.**—C. S. Nichols & Co., Tin Cup, owners; group comprises twelve claims, 1500x300 feet each; situated on Smythe Mountain, Tin Cup district, near Tin Cup; veins all contacts, varying in width, and containing galena, which assays from twenty to forty per cent lead and from 20 to 100 ounces silver per ton, in a quartz gangue, developed by two tunnels 400 feet each in length.



**July Bird.**—John W. Foss, Edward Edwards, John G. Jones, N. Shutliff, Richard Rolf, and John J. McKay, all Irwin, owners; claim 1500x300 feet; situated in Redwell Basin, Ruby district, three miles from Irwin; located in 1881; vein a fissure, with a crevice eight feet wide, containing quartz carrying galena and iron, with some copper, which assays forty-two ounces silver per ton, in a quartz gangue; developed by a shaft twenty-eight feet in depth.

**Justice.**—B. F. Field and Harold and Lee Thompson, all Irwin, and Lord & Stottenburg, Chicago, Ills., owners; claim 1500x300 feet; situated in Justice Basin, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; vein a fissure, with a crevice three feet wide, and a pay streak from three to ten inches, containing quartz and galena with ruby and brittle silver, assaying from 100 to 500 ounces silver per ton; developed by a tunnel sixty feet in length and an open cut ten feet in length.

**Katie R.**—P. Breen, W. P. James, and C. E. Wagner, all Crested Butte, Colo., owners; claim 1500x300 feet; situated in Baxter Basin, Elk Mountain Mining district, eight miles from Crested Butte; located in 1880; vein a fissure, with a crevice twenty feet wide, and a pay streak eighteen inches, containing galena and iron pyrites, assaying twenty-seven ounces silver per ton, in a quartz gangue; developed by a tunnel twenty feet in length and a shaft ten feet in depth.

**Kimberly.**—C. S. Roe, Pitkin, Anson Law, and Jacob Wheeler, both Springfield, Ill., owners; claim 1500x300 feet; situated in Jones' Gulch, and on Deadwood Ridge, Quartz Creek district, three and one-half miles from Pitkin; located in 1880; vein a fissure, with a crevice seven feet wide, containing quartz carrying gold, which assays one and one-fourth ounce gold per ton; developed by a shaft seventy feet deep.

**King of Wealth.**—300x1500 feet; situated on the south horn of Trail Mountain, three miles south of Pitkin, Quartz Creek district; located in August, 1880; owner Jno. J. McGrath, Silverton; vein a fissure five feet wide, containing decomposed porphyry, assaying twenty ounces silver and some gold per ton; developed by a shaft thirty feet deep.

**Kirkendall.**—J. W. Skinner, F. V. Miller, and S. P. Lyon, all Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, three-fourths mile from Irwin; located in 1881; vein a fissure, with a crevice eight feet wide, and a pay streak from six to ten inches, containing galena, with ruby and wire silver, assaying fifty ounces silver per ton, in a quartz gangue; developed by a tunnel 155 feet long.

**Lacy.**—E. A. Mattoon, Buena Vista, Edward Green, Gothic, and Thos. McKinsey, Fairport, Ill., owners; claim 1500x300 feet; situated on Elk Mountain, Elk Mountain district, seven miles from Gothic; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak from four to thirteen inches, containing galena, with wire and native silver, assaying 400 ounces silver per ton, in a quartz gangue; developed by a tunnel thirty feet in length and a shaft ten feet deep.

**Lady Elgin.**—H. W. Hitchcock, Gunnison City, owner; claim 1500x300 feet; situated on the west end of Sheep Mountain, Elk Mountain district, eight miles from Scofield; located in 1881; vein a fissure, with a crevice four feet wide, containing quartz and galena, assaying forty ounces silver per ton; developed by a shaft twenty feet deep.

**Last Chance.**—Harold C. Thompson, Lee Thompson, and N. O. Berg, all Irwin, and M. O. Rollins, Minneapolis, Minn., owners; claim 1250x300

feet; situated at Irwin, adjoining the Forest Queen lode, Ruby district; located in 1879; vein a fissure, with a crevice four feet wide, and a mineral streak twenty inches containing galena with ruby and brittle silver and arsenical iron in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by two shafts twenty and sixty feet in depth and a tunnel 125 feet in length; output 100 tons.

**Lee Group.**—J. H. McCoy, Philip Peters, and J. N. McCaim, all Gunnison City, and Andrew Stone, Sabola, Colo., owners; group comprises thirty-one claims, covering 300 acres of surface ground; situated at Sabola, Gunnison district, thirty miles from Gunnison City; containing a vein of pure magnetic iron about twenty feet thick; output 200 tons.

**Legal Tender.**—P. E. Robinson, P. A. Della, and F. W. Ferry, all Pitkin, owners; claim 1500x300 feet; situated on the north slope of Gold Ridge, Quartz Creek district, four miles from Pitkin; located in 1880; vein a fissure, with a crevice three feet wide containing gold-bearing quartz, milling from one and one-half to two ounces gold per ton; developed by two shafts twelve and twenty-eight feet in depth and four tunnels, 35, 45, 65, and 110 feet in length; output 200 tons, with a capacity to produce from five to ten tons per day.

**Legal Tender Stamp-mill.**—P. E. Robinson, F. W. Ferry and P. A. Della, all Pitkin, Colo., owners; building situated on the north slope of Gold Ridge, four miles from Pitkin; containing a Battery of five Stamps with the necessary motive power; capacity five tons per day.

**Lewiston Boy.**—N. Jennings, Frank Pratt, and G. W. Gregory, all Gunnison City, owners; claim 1500x300 feet; situated between Sheep and Arkansas Mountains, Elk Mountain district, twenty miles from Crested Butte; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from six to twenty-two inches, containing quartz and galena, assaying 250 ounces silver per ton; developed by a shaft thirty feet in depth and a drift on the vein twenty feet long.

**Little Anna.**—L. D. Neerland and Charles Ware, both Tin Cup, and J. V. Farwell, Chicago, owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, six miles from Tin Cup; located in 1878; vein a contact, with a crevice four feet wide, and a pay streak sixteen inches, containing galena and sulphurets, assaying from 100 to 200 ounces silver and $100 gold per ton, in a quartz gangue; developed by a shaft twenty feet deep.

**Little Chief.**—L. W. and J. W. Woods, both Crested Butte, H. W. Smith, Pitkin, and A. Badger, Hancock, owners; claim 1500x300 feet; situated at the head of Quartz Creek, Quartz Creek district, nine miles from Pitkin; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak ten inches, composed of quartz and galena, assaying sixty ounces silver per ton; developed by an incline shaft thirty feet deep.

**Little Chief.**—George Bethune and G. H. Rodie, both Ashcroft, owners; claim 1500x300 feet; situated on Taylor River, Taylor district, two miles from Ashcroft; located in 1882; vein a fissure, with a crevice thirteen feet wide, and a pay streak from ten to thirty inches, containing galena with some ruby silver, assaying sixty ounces silver per ton, in a quartz gangue; developed by a shaft eighteen feet in depth.

**Little Ella and Railroad Boy.**—J. E. Shallcross, Crested Butte, Chas. Lanterett and E. B. Smith, both Tin Cup, owners; claims 1500x300 feet each; situated on American and Amazon Mountains, Tin Cup district; located in 1880; veins both contacts, containing from eleven to twenty-three inches in width of quartz and galena, assaying from 80 to 160 ounces silver per ton; Little Ella developed by a shaft sixty feet in depth and Railroad Boy by a shaft thirty feet deep.



**Little Elsie and Ten Broeck.**—Two adjoining claims on the same vein; B. F. Field, Irwin, owner; claims cover 3000x300 feet; situated on the divide between Peeler and Independence Basins, Ruby district, one and one-half miles from Irwin; located in 1879; vein a fissure, with a crevice from four to twenty feet wide, containing quartz carrying galena, iron pyrites, and zinc blende, assaying from thirty to forty ounces silver per ton; developed by a shaft seventy feet in depth and a tunnel forty-five feet long.

**Little Frank and Little Dick.**—Two adjoining claims on the same vein; C. W. Cornell, Irwin, and N. R. Cornell, Knoxville, Iowa, owners; claims 1500x300 feet each; situated on Ruby Hill, Ruby district, one and one-fourth miles from Irwin; located in 1880; vein a fissure six feet in width, pay streak eighteen inches, composed of quartz carrying ruby and native silver, assaying 300 ounces silver per ton; developed by a shaft seventy-five feet in depth and a twenty-foot tunnel.

**Little Glasgow.**—L. D. Neerland, Tin Cup, owner; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with limestone and porphyry walls, and a crevice five feet wide, containing carbonates of iron in a decomposed gangue, which mill-runs, when sorted, thirty-five ounces silver per ton; developed by a shaft seventy-five feet in depth and a level thirty feet in length.

**Little Goddess Group.**—S. S. Chapman, 16 Lake street, Chicago, Ill., owner; group comprises the Little Goddess, Stoddard, Cora, Helen, Red Cloud, and other lodes, 1500x300 feet each; situated on Gold Hill, Tin Cup Mining district; located in 1879; veins all contacts, with crevices from one to four feet wide, and pay streaks from two to fifteen inches, containing galena and chlorides, assaying from 70 to 100 ounces silver per ton, in a lime gangue; developed by 100 feet of shafts.

**Little Maggie.**—M. Joyce and M. B. Smith, Tin Cup and Denver, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1881; vein a contact, with a pay streak eight inches wide, containing gold-bearing quartz; developed by a twenty-two-foot shaft.

**Little Nell and Flag-staff.**—J. T. Williams, Rosita, owner; claims 1500x300 feet each; situated in Poverty Gulch, Elk Mountain district, ten miles from Crested Butte; located in 1881; veins both fissures, with crevices six and five feet in width, and pay streaks sixteen and twenty-three inches, respectively, containing galena in a quartz gangue, which mill-run, when sorted, forty per cent lead and from thirty to eighty ounces silver per ton; developed by an open cut on the Little Nell vein 130 feet in length and an eighteen-foot shaft on the Flag-staff.

**Lone Elm Mining and Smelting Company (The).**—(Joplin, Mo.); manager, E. R. Moffett, Gunnison City; owns a smelting-works, situated at Gunnison City, consisting of furnace-building, 50x25 feet, containing one twenty-ton Furnace, and bag-house, 30x15 feet, containing two iron hoppers—the two buildings connected by a brick flue five and one-half feet in the clear and 1,000 feet long, through which the fumes from the ores pass into the hoppers, where they condense and become deposited on woolen bags, from which the mineral is easily removed; motive power supplied by one thirty-horse-power engine; capacity twenty tons per day.

**Los Tegas.**—1500x225 feet; situated on Rothschild Mountain, Tin Cup district; vein a contact, varying in width, and containing galena and lead carbonates in a decomposed gangue.

**Lost Trail.**—(See Armstrong Gulch Consolidated Mining Company.)

**Louisa.**—D. J. and H. J. Mawhester and —— Pearsall, all Tin Cup, owners; claim 1500x300 feet; situated on Boulder Mountain, Tin Cup district, three-fourths mile from Tin Cup; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak from six to twenty-four inches, containing gold-bearing quartz, assaying one and one-half ounces gold per ton; developed by a shaft sixty-three feet in depth.

**Lucille.**—C. R. Hard and E. L. and F. L. Ford, all Pitkin, Colo., owners; Frank Carlin, manager; claim 1500x300 feet; situated in Jones' Gulch, Quartz Creek district, four and one-half miles from Pitkin; located in 1880, and patented in 1882; vein a fissure, with a crevice twenty feet wide, containing two mineral streaks six and eighteen inches in width of quartz and iron pyrites, with galena, which mill-runs, when sorted from the gangue-rock, one and one-half ounces gold and two ounces silver per ton; developed by a tunnel 125 feet in length and a shaft ninety-four feet in depth; daily output from fifteen to thirty tons.

**Lucille Mill.**—C. R. Hard and E. L. and F. L. Ford, all Pitkin, Colo., owners; building (frame) 70x30 feet; situated in Jones' Gulch, and built by Fraser & Chalmers, Chicago, and containing ten Stamps (with facilities to put up twenty Stamps), two Copper Plates, and Frue Vanners; motive power supplied by one thirty-horse-power engine; capacity twenty tons in twenty-four hours.

**Lubricator.**—H. C. Nichols and W. C. Francis, both Gunnison City, owners; agent, J. J. Donnelly, Gunnison City; claim 1500x300 feet; situated at Willard, on Cochetopa Creek, Cochetopa district, four miles from Parlins; located in 1880; vein a fissure, with a crevice seven feet wide, containing quartz carrying gold, assaying seven ounces gold per ton; developed by a shaft twenty-eight feet deep.

**Lucky Cuss and Mountain Maid.**—C. W. and W. H. Rodecker and R. W. Lusk, all Pitkin, Colo., owners; claims 1500x300 feet each; situated on Ohio Creek, Quartz Creek district, four and one-half miles from Pitkin; located in 1881; veins both fissures, with crevices four and six feet in width, respectively, containing quartz and galena, with copper pyrites, assaying one-half ounce gold and twenty ounces silver per ton; developed by two shafts twenty-two and twenty-eight feet in depth.

**Luona Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1881; capital stock $4,000,000, in 400,000 shares of $10 each, non-assessable; president, A. B. Hough, Cleveland, Ohio; vice-president, J. H. Fletcher, Gothic; treasurer and superintendent, C. H. Gorstin; secretary, Oscar Reuter—both Denver; owns the Luona and one-third of the Hancock lodes, 1500x300 feet each; situated on Elk Mountain, Elk Mountain district, six miles from Gothic; located in 1880, and in process of patent; veins both fissures, with crevices from two to ten feet in width, containing galena in a quartz gangue, assaying from twenty to sixty ounces silver per ton; developed by surface drifts and assessment work.

**Madeline No. 2.**—D. C. Hobart, L. C. Ridgeway, C. R. Berry, T. T. Speer, and C. C. Runner, all Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, twenty-one miles from Buena Vista; located in 1881; vein a fissure, with a crevice four feet wide, and a pay streak from three to fourteen inches, containing quartz and galena, with native silver, which mill-runs, when sorted from the gangue-rock, sixteen per cent lead and 200 ounces silver per ton; developed by a shaft sixteen feet in depth; output ten tons.



**Maggie Mitchell and Emma C.**—Dr. A. Wierich, Galena, Ill., owner; Geo. Wilson, Pitkin, manager; claims 1500x300 feet each; situated on Gold Hill, lying parallel to the Moonlight and Midnight mines, Quartz Creek district, three and one-half miles from Pitkin; located in 1881, and in process of patent; veins both fissures, with crevices four and one-half feet wide, containing gold-bearing quartz, milling from one and one-half to four ounces gold per ton; developed by two shafts on the vein seventy-five and eighty-five feet in depth; output 150 tons.

**Magnolia.**—John C. Darby and Francis Darby, both Larned, Kansas, owners; claim 1500x300 feet; situated in O-Be-Joyful Basin, Ruby district, four and one-half miles from Ruby; located in 1882; vein a fissure, with a crevice six and one-half feet wide, containing quartz carrying galena, gray copper, and silver glance, assaying 104 ounces silver per ton; developed by a tunnel eighteen feet in length.

**Mammoth.**—B. C. Gray & Co., Tin Cup, owners; claim 1500x300 feet; situated three miles west of Tin Cup, Tin Cup district; located in 1880; vein a fissure, with a crevice one and one-half feet wide, containing quartz carrying gold, which assays from $50 to $100 per ton; developed by a shaft twenty feet deep.

**Marlow Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, C. B. Southard; treasurer, T. L. Rogers; secretary, E. H. Mason—all Boston; general manager, Samuel B. Conley, Irwin; offices 82 Devonshire street, Boston, and Irwin; owns the Coos, Rising Sun, Daisy, Iron Mountain, Green Wave, and Ivanhoe lodes, 1500x300 feet each; situated on Rock Creek, in Elk Basin, and on Ruby Mountain, Elk Mountain and Ruby districts; located in 1879 and 1880; veins all fissures, with crevices from four to fifteen feet wide, and pay streaks from three to forty inches, containing galena and gray copper, assaying 200 ounces silver per ton, in a quartz gangue; developed by two shafts 50 and 130 feet in depth and a tunnel 100 feet long.

**Mary Maher.**—(Extension of Jimmy Mack); John Sweeney, E. C. Stoddard & Co., and L. H. Little, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice four feet wide, and a pay streak from twelve to thirty inches, containing carbonates of iron, sulphurets, and chlorides in a decomposed gangue, milling, when sorted, from fifty to eighty ounces silver per ton; developed by a shaft fifty feet in depth and a level 135 feet in length.

**Mastodon.**—J. C. H. Grabill, J. H. Graham, Chas. McGill, J. Hohman, and S. Swartz, all Buena Vista, owners; claim 1500x300 feet; situated at the head of Waterloo Gulch, twenty miles from Buena Vista, Silverside district; vein a fissure, from thirty to forty feet in width, containing quartz and galena, assaying from 70 to 100 ounces silver per ton; developed by an open cut twelve feet in length, with a twelve-foot face.

**Mattie Smith.**—R. L. Cochran and W. J. Shorer, both Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup Mining district; located in 1879; vein a contact, with a crevice four feet wide, and a pay streak

from four to twenty inches, containing galena and iron pyrites, assaying sixty ounces silver per ton, in a lime gangue; developed by a tunnel fifty feet in length.

**Maud Ashbrook Group.**—B. F. Field, Irwin, and Clayton Smith, Philadelphia, owners; group comprises the Maud Ashbrook, Philadelphia Belle, and Perhaps lodes, 1500x300 feet each; situated in Ruby Basin, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; veins all fissures, with crevices from four to six feet in width, and pay streaks from six to thirty inches, containing galena, with ruby and wire silver, assaying from 150 to 300 ounces silver per ton, in a quartz gangue; developed by four shafts from forty to forty-five feet in depth and three drifts from thirty to fifty feet in length.

**Mayflower.**—James Graves, F. M. Housling, and C. W. Lewis, all Tin Cup, Colo., owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, six miles from Tin Cup; located in 1879, and patented; vein a contact, with a crevice two feet wide, and a pay streak from six to thirty inches, containing galena and sulphurets, assaying 180 ounces silver per ton, in a quartz gangue; developed by two shafts 90 and 110 feet in depth.

**M. C. R. R.**—(See Jimmy Mack Group.)

**Michigan and Colorado Mining Company (The).**—Incorporated under the laws of Michigan, October 19, 1880; capital stock $400,000, in 16,000 shares of $25 each, non-assessable; president, Nathaniel Slaght; secretary and treasurer, Orin G. Fox—both Greenville, Mich.; general manager, Aaron Slaght, Pitkin; offices Greenville, Mich., and Pitkin, Colo.; owns the Silver Islet, Silver Edge, Silver Nugget, Silver Cord, and Silver Urn, 1500x150 feet each, and the Silver Arrow, 1500x80 feet; situated on Silver Islet Mountain, Quartz Creek district, two and one-half miles from Pitkin; located in 1879, and patented in October, 1882; veins all fissures, with crevices from ten to fifty feet in width, and pay streaks from six inches to four feet, containing gold-bearing quartz and galena, milling, when sorted from the gangue-rock, two-tenths ounce gold and fifty ounces silver per ton; developed by a shaft 350 feet in depth, an incline 262 feet in length, and three levels from 50 to 200 feet in length; output 3,000 tons, and daily shipments fifty tons.

Also owns and operates a chlorination-works; situated in Armstrong Gulch, at the foot of Silver Islet Mountain, one mile from Pitkin; main building four stories high and 36x66 feet, containing eight Retorts, 1,600 pounds capacity each, Crushers, two sets Cornish Rolls, three amalgamators, automatic feeders, and revolving screens; motive power supplied by a twenty-five-horse-power engine; capacity fifteen tons in twenty-four hours, but it can be readily increased to forty tons; there is a complete assaying department in connection with the works.

**Midnight.**—Mrs. E. T. Stagg, Denver, and J. A. Baker, Pitkin, owners; Doc. Castleman, superintendent; claim 1500x300 feet; situated on Cumberland Mountain, Quartz Creek district, three and one-half miles from Pitkin; located in 1882, and in process of patent; vein a fissure, with a pay streak from six inches to four feet wide, containing gold-bearing quartz, which mill-runs one ounce gold per ton; developed by two shafts 115 and 160 feet in depth, respectively, and a drift 200 feet in length; worked by a fifteen-horse-power engine; output 400 tons.

**Midnight Group.**—Edgar Virgil, Scace L. Maultby, and J. D. Lee, all Crested Butte, owners; group comprises the Midnight, Forest Hill, and Nickel lodes, 1500x300 feet each; situated on the divide between O-Be-Joyful Basin and Coal Creek, Elk Mountain district, three miles from Crested Butte;



located in 1882; veins all fissures, with crevices from four to six feet in width, and pay streaks from six to ten inches, containing iron and brittle silver, assaying twenty-two per cent nickel, three-fourths ounce gold, and twenty-one ounces silver per ton; developed by three shafts from ten to forty feet in depth.

**Milwaukee.**—Nathaniel Shurtliff, Irwin, owner; claim 1500x300 feet; situated on Ruby Peak, Ruby district, one and one-half miles from Irwin; located in 1879; vein a fissure, with a crevice four feet wide, and a pay streak from five to twenty-two inches, containing galena, ruby and native silver, and zinc blende, assaying 105 ounces silver per ton, in a quartz gangue; developed by a tunnel twenty feet in length and a shaft fifteen feet in depth.

**Mineral Farm Group.**—Five adjoining claims on the same vein; Harry Hart, D. E. Kimlin, and C. S. Roe, all Pitkin, owners; group comprises the Mineral Farm, Whittemore, Nevada Consolidated, Nevada Boy, and Clara lodes, 1500x300 feet each; situated on the north fork of Quartz Creek, Quartz Creek district, six miles from Pitkin; located in 1881; vein a fissure four feet wide, containing galena, chlorides, and black sulphurets in a quartz gangue, which mill-runs, when sorted, 100 ounces silver per ton; developed by a joint shaft between the Whittemore and Nevada Consolidated 107 feet in depth, on the Nevada Boy a shaft forty feet, on the Clara a shaft forty feet and a twenty-foot drift; output from five to twenty tons per day.

**Minnie Simmons.**—R. L. Cochran, Wm. Roof, and H. E. Warner, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, five and one-half miles from Tin Cup; located in 1879; vein a contact, with a crevice four feet wide, containing sulphurets and galena, assaying forty ounces silver per ton, in a limestone gangue; developed by a shaft fifty feet in depth and a cross-cut at the bottom of the shaft thirty feet in length.

**Monitor Group.**—(See Elko Gold and Silver Mining Company.)

**Monongahela.**—T. T. Speer and others, Buena Vista, owners; claim 1500x300 feet; situated in Texas Basin, East and Middle Texas district, twenty miles from Buena Vista; located in 1882; vein a fissure, with a crevice five feet wide, and a pay streak six inches, containing galena and gray copper, assaying seventy-six ounces silver per ton, in a quartz gangue; developed by a shaft ten feet in depth and a ten-foot open cut.

**Moonlight.**—A. M. Jones, Denver, W. T. and S. V. Newell, John Johnson, and P. C. Hanson, all Central City, Colo., owners; claim 1500x300 feet; situated on the south side of Ohio Creek, Quartz Creek district, four miles from Pitkin; located in 1882; vein a fissure, with a pay streak two feet wide, containig gold-bearing quartz, which mill-runs from two to six ounces gold per ton; developed by a shaft 125 feet in depth and 100 feet of drifting; output 300 tons.

**Mountain Belle.**—Thomas Owens, Irwin, owner; claim 1500x300 feet; situated on Ruby Mountain, Ruby district, one-half mile from Irwin; located in 1879, and in process of patent; vein a fissure, with a crevice ten feet wide, and a pay streak from two to twenty inches of ruby and native silver and galena, assaying 400 ounces silver per ton, in a quartz gangue; developed by a shaft sixty feet in depth, a tunnel thirty feet in length, and two open cuts, exposing the vein for a distance of 300 feet.

**Mountain Boy.**—E. P. Rose and Thomas Harris, both Pitkin, owners; claim 1500x300 feet; situated on Islet Mountain, at the head of Halls Gulch, Quartz Creek district; located in 1880, and in process of patent; vein a fissure, with a crevice three feet wide, containing quartz carrying galena, which

assays twenty per cent lead and fifty ounces silver per ton; developed by a shaft seventy feet in depth and two drifts forty feet in length each from the bottom of the shaft; output forty tons.

**Mountain Sheep.**—Alexander Gullett, Gunnison City, D. B. Powers, Salina, Kansas, and R. C. Evans, Crested Butte, owners; claim 1500x300 feet; situated at the head of Maroon Creek, Elk Mountain district; located in 1879; vein a fissure, with a crevice twenty-eight inches wide, containing quartz, galena, and native silver, assaying from 82 to 100 ounces silver per ton; developed by a shaft fifteen feet in depth and an open cut twenty feet long.

**Napoleon.**—D. D. Bliven, Tin Cup, John A. Baker and C. Makepeace, both Pitkin, and Pierce & Tuttle, Denver, Colo., owners; claim 1500x300 feet; situated at the head of North Quartz Creek, Quartz Creek district, ten miles from Pitkin; located in 1879; vein a fissure, with a crevice forty-six feet wide, containing pockets of galena in a quartz gangue, which mill-runs, when sorted, fifty ounces silver per ton; developed by a tunnel fifty feet in length and a shaft twenty-five feet in depth.

**New York and Colorado Anthracite Coal Company (The.)**—Incorporated under the laws of New York; capital stock $1,500,000; president, —— Voorhis, New York City; vice-president, Alexander Pomeroy; secretary, Clarence Depew; general manager, A. S. Buell—all Rochester, New York; superintendent, Thomas Lynch, Crested Butte; owns 1,500 acres of coal land, three miles north of Crested Butte, containing veins, or strata, of anthracite, coal varying in thickness; developed by entries and 1,000 feet of drifting; output 1,000 tons.

**New York Group.**—Comprising the New York, Martha, Effie T., Inez, and Jessie Benton lodes; W. H. Hunt, Weston, Mo., and others, owners; claims 1500x300 feet; situated on Pearl Mountain, Brush Creek Mining district, fifteen miles from Crested Butte; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak from eighteen to twenty inches, containing native and brittle silver, assaying from 78 to 102 ounces silver per ton, in a quartz gangue; developed by five shafts twelve feet in depth each.

**Nil Desperandum.**—W. W. Lewis and others, Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1879; containing three contact veins, with pay streaks from three to eleven inches in width, composed of galena and chlorides in a lime-rock gangue, milling, when sorted, one ounce gold and fifty ounces silver per ton; developments—one shaft 160 feet deep and one sixty-foot level.

**Oakes.**—R. A. Duncan, W. E. Grover, and others, Irwin, Colo., owners; claim 1500x300 feet; situated on Ruby Mountain, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; vein a fissure five feet wide, pay streak eighteen inches, containing galena, with ruby, brittle, and native silver, and silver glance, which mill-runs, when sorted from the gangue-rock, from 100 to 300 ounces silver per ton; developed by a shaft 100 feet in depth.

**Oil Exchange.**—Ai Moss, O. W. Petrolin, and W. K. Gibson, all Pitkin, owners; claim 1500x300 feet; situated on German Flats, Quartz Creek, district, three miles from Pitkin; located in 1880; vein a fissure, with a crevice six feet wide, and a pay streak from four to twenty inches, containing gold-bearing quartz, which assays two ounces gold per ton; developed by a shaft 109 feet in depth and a tunnel fifty feet in length.

**Old Mexico.**—V. A. Wilder, and Niels McDonald, both Irwin, owners; claim 1500x300 feet; situated on Ruby Peak, Ruby district, one and one-



fourth miles from Irwin; located in 1879; vein a fissure, with a crevice eight feet wide, containing quartz carrying ruby and brittle silver, assaying from 30 to 200 ounces silver per ton; developed by a shaft thirty feet in depth and a level twenty feet long.

**Old Reliable.**—A. H. Wade, Wm. Connelly, John Paul, and Thos. Freeman, all Buena Vista, owners; claim 1500x300 feet; situated on Texas Creek, East and Middle Texas district, sixteen miles from Buena Vista; located in 1882; vein a fissure, with a crevice three and one-half feet wide, containing quartz and galena, assaying fifty ounces silver per ton; developed by a shaft twenty feet in depth.

**Old Sheik.**—(See Ruby Chief and Old Sheik.)

**Omarum.**—H. Williams, J. H. Chamberlain, and V. J. Hogan, all Pitkin, owners; claim 1500x300 feet; situated on Deadwood Ridge and on the south side of Jones' Gulch, Quartz Creek district, three and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice four feet wide, and a pay streak from ten to twenty inches, containing gold-bearing quartz, assaying two ounces gold and nine ounces silver per ton; developed by a shaft thirty feet in depth; output thirty tons.

**Ontario.**—Patrick Dailey, Crested Butte, and others, owners; claim 1500x300 feet; situated near the Lead Chief mine, three-fourths mile from Irwin, Ruby district; located in 1879; vein a fissure, with a pay streak sixteen inches wide, containing quartz with brittle, ruby, and native silver, assaying twenty-eight ounces silver per ton; developed by a shaft twenty-eight feet in depth.

**Ontario.**—J. W. Forrest and H. D. Pearsall, both Tin Cup, and N. Hollock, Denver, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1878; vein a contact, with a crevice four feet wide, containing galena and iron in a quartz gangue, which assays eleven ounces silver per ton; developed by a shaft 170 feet in depth and an incline seventy feet long from the bottom of the shaft.

**Ontario.**—E. E. Root and John Curry, both Pitkin, owners; claim 1500x300 feet; situated on the west slope of Gold Ridge, Quartz Creek district, four and one-half miles from Pitkin; located in 1879; vein a fissure, with a pay streak twenty inches wide, containing gold-bearing quartz, assaying one ounce gold per ton; developed by a tunnel forty feet in length and a twelve-foot shaft.

**Oracle.**—A. H. Jackson, John Dempsey, Benj. Getty, Chas. Gott, and Wm. Friend, all Pitkin, Colo., owners; claim 1500x300 feet; situated at the foot of Fairview Peak, Quartz Creek district, four miles from Pitkin; located in 1882; containing two veins, about four feet wide each, pay streaks twelve inches, composed of carbonates and sulphurets, assaying 100 ounces silver per ton, in a decomposed gangue; developed by two shafts thirty and seventy feet in depth and a twenty-five-foot drift.

**Orient.**—J. H. Chamberlain, Robert Smith, and J. W. Fitzsimmons, all Pitkin, owners; claim 1500x300 feet; situated in Jones' Gulch, Quartz Creek district; located in July, 1882; vein a fissure, with a crevice five feet wide, containing gold-bearing quartz, which assays two and one-fourth ounces gold per ton; developed by a tunnel fifty-five feet in length.

**Oro and Louisa.**—John Curry, Geo. A. Hynes, and E. P. Bell, all Pitkin, owners; claims 1500x300 feet each; situated on the south-east slope of

Silver Islet Mountain, near the Silver Islet mine, Quartz Creek district, one and three-fourths mile from Pitkin; located in 1879; veins both fissures, with crevices four feet wide, and pay streaks from four to twenty inches, containing galena, sulphurets, and chlorides, assaying fifteen ounces silver per ton, in a quartz gangue; developed by a tunnel twenty-five feet in length and a shaft twenty feet in depth.

**Ottawa and Big Fortune.**—Chas. W. Rodecker and G. W. Hutchinson, both Pitkin, Colo., owners; claims 1500x300 feet each; situated on Ohio Creek, Quartz Creek district, four and one-half miles from Pitkin; located in 1882; veins both fissures, with crevices four and fourteen feet in width, respectively, but no defined pay streaks, the crevice-matter being composed of quartz, iron pyrites, and galena, assaying two ounces gold and three ounces silver per ton; developed by two open cuts eleven and twelve feet in length.

**Painter Boy Group.**—(See Elk Mountain Consolidated Gold and Silver Mining Company.)

**Philadelphia Coal and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, A. W. Tourgee; vice-president, Henry M. Decherd; secretary and treasurer, August H. Moore—all Philadelphia, Pa.; general manager, M. Rush Warner, Gunnison City; office Gunnison City; owns the Warner Coal Bank, covering 640 acres of surface ground; situated at Slate River, one and one-half miles above Crested Butte; containing five veins, or strata, of anthracite coal, from three to five feet in thickness; developed by one 400-foot entry and one horizontal air-shaft 100 feet long; improvements—one coal-breaker and some buildings.

**Picket.**—M. Smith and T. Nicholson, both Tin Cup, owners; claim 1500x300 feet; situated on American Mountain, Tin Cup district, three miles from Tin Cup; located in 1881; vein a contact, with a crevice four feet wide, containing galena, iron and lead carbonates, assaying forty per cent lead and fifty ounces silver per ton, in a decomposed gangue; developed by a shaft seventy-five feet in depth.

**Pilgrim.**—Edgar Virgil and J. D. Lee, both Crested Butte, owners; claim 1500x300 feet; situated on the divide between Elk and Redwell Basins, Elk Mountain district, six miles from Crested Butte; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak from six to twelve inches, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by a tunnel ten feet in length.

**Pine Tree.**—J. Hohman, L. Swartz, R. P. Walker, M. G. Walker, H. H. Bruner, Chas. McGill, and O. H. Johnson, all Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch, East and Middle Texas district, thirty miles from Buena Vista; located in 1882; vein a fissure three feet wide, containing quartz, with gray copper and galena; developed by an open cut twenty feet in length.

**Pioneer Group.**—Jos. E. McClure, H. C. Bostwick, and Henry Campbell, all Alpine, Colo., owners; group comprises the Pioneer and Empire lodes, 1500x300 feet each, and Miantinoma, 1200x300 feet; situated on Gold Hill, Tin Cup district, three miles from Tin Cup; located in 1878; veins all contacts, with crevices from four to seven feet wide, containing iron carbonates, which mill-run, when sorted from the gangue-matter, forty per cent lead, three-fourths ounce gold, and ten ounces silver per ton; developed by seven shafts from ten to seventy-five feet in depth and two open cuts forty-five and seventy-five feet in length.



**Pitkin.**—John Curry, Jonathan Wright, and H. Williams, all Pitkin, Colo., owners; claim 1500x300 feet; situated on the north slope of Gold Ridge, at the head of Spring Gulch, Quartz Creek district, three and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice three and one-half feet wide, containing quartz carrying gold, but no defined pay streak; developed by a fifteen-foot shaft.

**Pocahontas Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1880; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president, J. E. Cole; vice-president, E. Friedenthal; secretary, T. F. McGiff; treasurer, E. A. Mattoon—all Buena Vista; owns the Yankee Doodle and Irwin lodes, 1500x300 feet each; situated on Forest Queen Hill, Ruby district, three-fourths mile from Irwin; located in 1880; veins both fissures, with crevices from two to four feet wide, and pay streaks from four to ten inches, containing galena, with ruby and brittle silver, in a quartz gangue; developed by four shafts from twelve to fifty feet in depth and one tunnel forty-five feet in length.

**Porcupine Group.**—Henry Williams, C. S. Roe, Jacob Wheeler, and J. F. McPherson, all Warren, Pa., C. H. Cornwall, Springfield, Ill., and H. E. Beck, Pitkin, owners; group comprises the Porcupine, McPherson, Iron Jack, Mammon, Wheeler, Eureka No. 2, Roe, 1500x300 feet each, a tunnel site, 3000x6 feet, and the Porcupine Placer, sixty acres; situated on Gold Hill, Quartz Creek and Tin Cup districts; located in 1878 and 1879; veins all contacts, in the Eureka twenty-five feet wide, and composed of quartz carrying galena, brittle silver, and carbonates, assaying eighty ounces silver per ton; in the Porcupine twenty feet of quartz carrying gray copper and carbonates of copper, assaying $80 per ton in gold and silver; Porcupine developed by a shaft eighty feet in depth, a tunnel 200 feet in length, and 200 feet of drifts; Eureka by an incline 113 feet long and a drift forty feet in length; and the Wheeler by an open cut thirty feet long.

**Prew.**—(Properly Drew); an extension of the Tin Cup, 1500x300 feet; situated on Gold Hill, Tin Cup district, about three and one-half miles from Tin Cup; vein a fissure, imbedded in limestone, about eight feet wide, and a pay streak from eighteen to twenty-four inches, containing lead sulphides, copper carbonates, and chlorides, in a lime-rock gangue, milling, when sorted, twenty per cent lead and from 50 to 150 ounces silver per ton; the developments consisting of about 800 feet of work, during the progress of which considerable ore has been extracted.

**Queen City Tunnel Site.**—Swartz & Co., Tin Cup, owners; claim 3000x6 feet; situated in the Tin Cup district, near Tin Cup; on which a tunnel is driven 112 feet in length, opening up two veins three and six feet in width, respectively, containing a very fair material.

**Rambler.**—John Sweeney and P. Sulpin, both Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles south of Tin Cup; located in 1879; vein a contact, with a crevice from three to four feet wide, and a pay streak four inches, containing carbonates of iron, assaying eighteen ounces silver per ton, in a decomposed gangue; developed by a tunnel sixty feet in length and a shaft fifteen feet in depth.

**Red Jacket.**—Nathaniel Slaght, Greenville, Mich., and J. C. Shattuck and J. S. Stanger, both Denver, owners; claim 1500x300 feet; situated at the foot of the Silver Islet Range, Quartz Creek district, one-half mile from Pitkin; located in 1878; vein a contact, with a crevice six feet wide, and a pay streak from four to thirty inches, containing black sulphurets, carbonates

of copper and iron, assaying from 50 to 150 ounces silver per ton, in a decomposed gangue; developed by a tunnel 135 feet in length and a shaft fifty feet in depth; output twenty-five tons.

**Red Jacket and Sarah Douglass.**—Geo. Summers, Pecatonica, Ill., and —— Farwell, Freeport, Ill., owners; claims 1500x300 feet each; situated in Dark Cañon, Elk Mountain district; located in 1880; veins both fissures, with crevices from two to four feet in width, containing quartz and gray copper, assaying 160 ounces silver per ton; developed by two shafts twenty feet in depth each.

**Red Lion.**—300x1500 feet; situated on the east slope of Terrible Mountain, seven miles north of Pitkin, Quartz Creek district; located in June, 1882; owners Geo. W. Bittenbender, Telluride, Andrew Heaton, Pitkin, and J. McIntyre, Gunnison City; vein a fissure two feet wide, containing quartz carrying galena, which assays $100 per ton; developed by one ten-foot-face open cut.

**Red Lion.**—G. H. Gilbertson and A. Brooks, both Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice eight feet wide, containing lead carbonates, assaying from 50 to 100 ounces silver per ton, in a decomposed gangue; developed by a shaft fifteen feet in depth.

**Red Prince and Iron Duke.**—J. McMurray, and others, Tin Cup, owners; claims 1500x560 feet; situated at the head of Taylor River, and on White Rock Mountain, Tin Cup district, thirty-two miles north-west of Tin Cup; located in 1880 and 1882; vein a contact, with a crevice from two and one-half to three feet in width, containing quartz and some galena, assaying forty per cent lead and from thirty-five to fifty ounces silver per ton; developed by a tunnel seventy-five feet in length and a shaft twenty feet in depth.

**Reva.**—A. M. Stevenson, D. T. Sapp, and Peter Peterson, all Pitkin, owners; claim 1500x300 feet; situated on the north fork of Quartz Creek, Quartz Creek district, five miles from Pitkin; vein a fissure, with a crevice forty feet wide, and a pay streak from six to thirty inches, containing quartz and galena, assaying forty ounces silver per ton; developed by a tunnel fourteen feet long and twenty feet of drifts.

**Richardson and Mt. Carbon Coal Company (The).**—Incorporated under the laws of Colorado, in March, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, B. B. Stiles, Denver; vice-president and superintendent, Sylvester Richardson, Gunnison City; secretary and treasurer, F. C. Taylor, Socorro, New Mexico; office corner New York Avenue and Tenth street, Gunnison City, Colo.; owns 640 acres of coal land; situated on Mt. Carbon Creek, eighteen miles west of Gunnison City; containing a vein of bituminous coal four feet in width; developed by one main entry 300 feet in length and two other entries 100 and 400 feet in length, respectively; there is also a horizontal air-shaft 100 feet in length; output 8,000 tons of coal, with facilities to ship 100 tons per day.

**Richmond.**—P. McGuinness and Daniel Harrison, both Crested Butte, and John Ryan, Quinida, owners; claim 1500x300 feet; situated on Richmond Mountain, Elk Mountain district, ten miles from Crested Butte; located in 1880; vein a fissure, with a crevice seven feet wide, and a pay streak from six to twenty inches, containing galena and gray copper in a quartz gangue, which mill-runs, when sorted, from 50 to 200 ounces silver per ton; developed by two shafts 100 feet in depth each; output seventy tons.



**Roaring Niagara.**—Swartz & Co., Tin Cup, owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, near Tin Cup; vein a contact five feet in width, containing galena impregnated with black sulphurets and brittle silver, assaying from 20 to 200 ounces silver per ton, in a porphyritic gangue; developed by one seventy-one-foot shaft.

**Robert Emmet.**—E. F. Colburn and John McElroy, both Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, one and one-fourth miles from Irwin; located in 1879; vein a fissure, with a crevice from three to four feet wide, and a pay streak four inches, containing ruby silver and zinc blende, assaying seventy-nine ounces silver per ton, in a quartz gangue; developed by a shaft thirty feet in depth and an open cut twenty feet in length.

**Robinson.**—P. E. Robinson, Chas. Oliver, F. G. Warren, and Geo. Biddle, all Pitkin, owners; claim 1500x300 feet; situated on the east slope of Green Mountain, Quartz Creek district, six miles from Pitkin; located in 1881; vein a fissure, with a crevice five feet wide, and a pay streak from eight to thirty-two inches, containing quartz and galena, assaying forty per cent lead and eighty ounces silver per ton; developed by a tunnel on the vein fifty feet in length; output forty tons.

**Rock and J. C.**—John Curry, Geo. A. Hynes, E. P. Bell, and others, Pitkin, owners; claims 1500x300 feet each; situated at the head of West Willow Creek, Tin Cup district, six miles from Tin Cup; located in 1879; veins both contacts, with crevices from two to six feet in width, and pay streaks from six to twelve inches, containing quartz, galena, and copper, assaying forty ounces silver per ton; developed by two tunnels ten and twenty feet in length and a seventy-five-foot shaft.

**Rock Creek Coal Company.**—(Unincorporated); composed of J. C. Eames, George Marshall, and George Albert, all Aspen, Colo., owners; owns 320 acres of coal land, situated on Rock Creek, twenty miles north of Scofield, containing eight veins of bituminous coal from one and one-half to ten feet in thickness; developed by assessment work.

**Rocky Mountain Mine Developing Company.**—(See Custer County); owns one-half of the Lakeside lode; situated on Cascade Mountain, Cascade district, eight miles from Crested Butte; vein a fissure, with a crevice eighteen inches wide, containing galena, assaying twenty per cent lead and 170 ounces silver per ton; developed by one ninety-two-foot tunnel.

**Rothschild.**—Morris Bros., Freeman, Colvin, and Warner, all Tin Cup, owners; claim 1500x225 feet; situated on Rothschild Mountain, Tin Cup district; located in 1879; vein a contact, with a crevice from three to four feet wide, and a pay streak twelve inches, containing galena and lead carbonates, assaying forty-five per cent lead and from twenty to forty ounces silver per ton, in a decomposed gangue; developed by a shaft twenty-four feet in depth.

**Rothschild Group.**—Owned by the Dwight-Chenon Mining Company and W. E. Marian; offices Dwight, Ill., and Tin Cup; group comprises the Rothschild, Rover, Belle of the Hill, Susie Crater, and Bullion lodes, 1500x300 feet each; situated on Rothschild Mountain, Tin Cup district, three-fourths mile from Tin Cup; located in 1879; veins all contacts, with crevices averaging two feet in width, containing galena, assaying sixty per cent lead and forty to eighty ounces silver per ton; developed by six shafts from eighteen to ninety feet in depth.

**Round Mountain Placer.**—R. L. Cochran and S. Mackey, both Tin Cup, Colo., owners; claim covers 120 acres; situated at Union Park, Tin Cup district, five miles from Tin Cup; developed by 200 feet of ditching.

**Ruby Chief and Old Sheik Group.**—Howard F. Smith, Crested Butte, Sanford O. Robinson, Pittsburgh, Colo., W. G. Wood, Iowa, and James Brennan and Chas. Diefbaugh, both Irwin, Colo., owners; group comprises the Ruby Chief, Old Sheik, Gem, and Peggie lodes, 1500x300 feet each; situated at the base of Ruby Peak, Ruby district, one and one-half miles from Irwin; located in 1879, and in process of patent; veins all fissures, with crevices from three to eight feet in width, and pay streaks from six to thirty inches, containing quartz carrying ruby, brittle, and native silver, which mill-run, when sorted, from 50 to 150 ounces silver per ton; developed by a tunnel on the vein 300 feet in length, a shaft ninety feet in depth, and a level 250 feet long on the Ruby Chief lode, and tunnels 50 and 150 feet in length on Old Sheik lode; output 1,000 tons.

**Ruby Durango Mining Company (The).**—Incorporated under the laws of New York, in January, 1881; capital stock $500,000, in 500,000 shares of $1 each, non-assessable; president, George A. Evans; secretary and treasurer, Geo. P. Sheldon—both New York; general manager, V. A. Wilder, Irwin; offices 74 Wall street, New York City, and Irwin; owns the Durango lode, 1500x300 feet; situated on Ruby Peak, Ruby district; located in 1879, and in process of patent; vein a fissure, with a crevice from two to fifteen feet wide, containing quartz carrying ruby, brittle, and native silver, which mill-runs, when sorted, from fifty to seventy-five ounces silver per ton; developed by a shaft 100 feet in depth, a drift on the vein 170 feet in length, and 100 feet of levels; worked by a seventeen-horse-power engine; output 1,000 tons.

**Ruby Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $4,000,000, in 200,000 shares of $20 each; president, Samuel W. Allerton; secretary and treasurer, Wm. L. White—both Chicago; superintendent, C. W. Watson, Gothic; offices American Exchange Company's Building, Chicago, and at Gothic, Colo.; owns the Sylvanite lode, 1500x300 feet; situated on Copper Creek, Elk Mountain district, seven and one-half miles from Gothic; located in 1879, and patented in 1880; containing several fissure veins, with a mineral streak in each from six to twenty inches in width, composed of wire, ruby, and native silver, in a quartz gangue, assaying from 100 to 700 ounces silver per ton; developed by four tunnels from 150 to 400 feet in length; operated by a fifty-horse-power engine.

**Ruby King.**—Ira Brown, Irwin, and W. T. Holt, Colorado Springs, owners; claim 1300x265 feet; situated in Ruby Camp, adjoining the Forest Queen lode, Ruby district; located in 1879, and in process of patent; vein a fissure, with a crevice twenty-two feet wide, and a pay streak from six to thirty inches, containing ruby, brittle, and native silver, and arsenical iron, assaying 200 ounces silver per ton, in a quartz gangue; developed by two shafts 75 and 100 feet in depth each, connected by a 100-foot level and a drift on the vein 250 feet long.

**San Juan and Uncle Sam.**—Two claims, 1500x300 feet each; situated on Granite Mountain, Tin Cup district; a tunnel on the vein of the former 250 feet long, showing an iron carbonate ore, assaying from $20 to $50 per ton, from which a cross-cut is run, cutting two veins containing large bodies of low-grade ore, and a sixty-foot tunnel on the vein of the latter, with a cross-cut designed to cut another lode carrying a free-milling ore, and assaying $15 per ton.



**Saturday Night.**—A. M. Stevenson, D. T. Sapp, and Peter Peterson, all Pitkin, owners; claim 1500x300 feet; situated on the north fork of Quartz Creek, Quartz Creek district, five miles from Pitkin; located in 1881; vein a fissure, with a crevice eight feet wide, and a pay streak six inches, containing gold-bearing quartz and galena, which assays one ounce gold and twenty-five ounces silver per ton; developed by a shaft twenty-one feet in depth.

**Scott and Lynch Coal Bank.**—John W. Scott and Thos. J. Lynch, both Crested Butte, owners; claim covers 160 acres, one and one-half miles south of Crested Butte; located in 1880; containing veins, or strata, of bituminous coal, varying in thickness; developed by one twenty-two-foot entry.

**Scott and McCloskey Coal Bank.**—John W. Scott and John McCloskey, both Crested Butte, owners; claim covers 160 acres, one and one-half miles south of Crested Butte; located in 1880; containing veins, or strata, of bituminous coal, varying in thickness; developed by one twenty-foot entry.

**Shoo Fly.**—R. M. Short and F. M. Kaltner, both Crested Butte, owners; claim 1500x300 feet; situated on the west side of Slate Creek, Elk Mountain district, six miles from Crested Butte; located in 1881; vein a fissure, with a crevice from three to four feet wide, and a pay streak eighteen inches, containing galena and zinc blende, assaying from ten to thirty ounces silver per ton, in a quartz gangue; developed by a tunnel thirty-five feet in length.

**Silent Friend and Robinson and Ferry.**—Two adjoining claims on the same vein; owned by H. O. Alden, Pueblo, Dr. W. S. Cockrell, E. H. Leaming, A. J. Conway, and D. T. Sapp, all Pitkin; claims are 1500x300 feet each; situated at the north fork of Quartz Creek, Quartz Creek district, five miles north of Pitkin; located in May, 1882; vein a contact, varying in width, containing a pay streak ten feet wide (three and one-half feet solid galena and six and one-half feet of carbonates, gray copper, and galena), milling an average of fifty per cent lead and ninety ounces silver per ton, when sorted from the gangue-rock; developed by a shaft 210 feet in depth, opening up, at a depth of ninety feet, a natural cave seventy-five feet deep and 175 feet long, lined with galena and carbonates; worked by a twenty-horse-power engine; output 1,200 tons, and daily shipments from ten to twenty tons.

**Silver Cord and Silver Reef.**—R. F. Stagg, Denver, John A. Baker and Frank Carlin, both Pitkin, owners; claims 1500x300 feet each; situated on the east side of Quartz Creek, Quartz Creek district, one and one-half miles from Pitkin; located in 1880; veins both fissures, with crevices from three to six feet wide, containing gold and silver bearing quartz, assaying two ounces gold and twenty-eight ounces silver per ton; developed by four shafts from fifteen to seventy-five feet in depth; output fifteen tons.

**Silver Islet.**—(See Michigan and Colorado Mining Company.)

**Silverdale.**—A. C. Cramer, Crested Butte, owner; claim 1500x300 feet; situated in O-Be-Joyful Basin, Ruby district, three and one-half miles from Irwin; located in 1881; vein a fissure, with a crevice two and one-half feet wide, containing gold and silver bearing quartz; developed by a tunnel on the vein twenty-five feet long.

**Silver King and Bay Billy.**—J. T. Williams, Rosita, and Willard Davis, Topeka, Kas., owners; claims 1500x300 feet each; situated in Dark Cañon, Elk Mountain district, eleven miles from Crested Butte; located in 1881; veins both fissures, with crevices from two to eight feet wide, and pay

streaks from six to twenty inches, containing galena and zinc blende, which mill-run forty per cent lead and from fifty to sixty ounces silver per ton, when sorted from the gangue-rock; Silver King developed by two shafts ten and fifteen feet in depth and a cross-cut, Bay Billy by four shafts, exposing the vein for a distance of 300 feet; output ninety tons.

**Silver King Extension.**—F. M. Kaltner, R. M. Short, and Richard Norton, all Crested Butte, owners; claim 1500x300 feet; situated in Dark Cañon, Elk Mountain district, ten miles from Crested Butte; located in 1882; vein a fissure, with a crevice eight inches wide, containing galena, which assays fifty ounces silver per ton, in a quartz gangue; developed by a tunnel twenty feet in length.

**Silver Lining and Cloud.**—Wm. Johnstone, John Cashion, both Gothic, and Chas. C. Colby, St. Albans, Vt., owners; claims 1500x300 feet each; situated on Copper Creek, Elk Mountain district; located in June, 1882; veins both contacts, with mineral streaks from eight to ten inches wide, containing galena and chlorides, assaying 180 ounces silver per ton; developed by a shaft fifty feet in depth and two tunnels 100 and 250 feet in length.

**Silver Queen.**—G. H. Gilbertson, Tin Cup, owner; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1880; vein a contact with a crevice five feet wide, and a pay streak thirty inches, containing iron carbonates, assaying sixty ounces silver per ton; developed by four shafts fifteen feet in depth each.

**Silver Queen Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, B. [illegible] Field, Irwin; vice-president, J. A. Goodwin, Telluride; secretary, treasurer and manager, Chas. Babb, St. Louis, Mo.; office 517 Pine street, St. Louis, Mo.; Gothic; owns the Silver Queen, Silver King, and Silver Extension; situated in Silver Basin, four miles east of Gothic, Elk Mountain district; located in 1879 and 1880; vein a contact-fissure eight feet wide, pay streak from three to two inches, containing gray copper, chlorides, and bromides of copper, assaying from $75 to $150 per ton; developed by one tunnel 100 feet long, with shaft from bottom of tunnel eighteen feet deep, and drift from bottom of shaft thirty-five long, one sixty-foot shaft with fifty feet of drifting from the bottom of it, and two open cuts fifteen feet each; the Sucker State, Oriental, and Wild Cat, 3[illegible] 1500 feet each; situated on Rock Creek, eight miles notrh-west of Gothic, Elk Mountain district; located in 1878 and 1879; vein a fissure four feet wide, pay streak eighteen inches, containing galena in a quartz gangue, assaying forty per cent lead and forty ounces silver per ton; developed by two shafts twenty feet deep each and one twenty-five foot open cut; output $1,000.

**Silver Wave.**—J. F. Barnes and S. R. Royster, both Crested Butte, owners; claim 1500x300 feet; situated in Dark Cañon and Poverty Gulch, Elk Mountain Mining district; located in 1880; vein a fissure, with a crevice four feet wide, and a pay streak twenty inches wide, containing gray copper, galena, and black sulphurets, assaying 800 ounces silver per ton, in a quartz gangue; developed by a tunnel forty feet in length.

**Silver World.**—1500x300 feet; situated on Gold Hill, Tin Cup district, about four miles from Tin Cup; vein a contact varying in width, and containing copper carbonates and lead sulphides, assaying from 50 to 150 ounces silver per ton, in a lime and porphyry gangue, and promising fairly.

**Silvernite.**—I. N. Barrett, John Lynch, Perry Reynolds, and others, all Buena Vista, owners; claim 1500x300 feet; situated in Waterloo Gulch,



East and Middle Texas district; located in 1882; vein a fissure, with a crevice five feet wide, and a pay streak from four to eleven inches, containing quartz and galena with native silver and gray copper, assaying 180 ounces silver per ton; developed by a shaft ten feet in depth.

**Silverside.**—D. T. Fuller, E. A. Mattoon, C. B. Wilson, T. F. McGiff, I. B. Calder, W. B. Gonsalves, and J. E. Cole, all Buena Vista, owners; claim 1500x300 feet; situated on Texas Creek, Silverside district, twenty-four miles from Buena Vista; located in 1881; vein a fissure, with a crevice forty feet wide, and a pay streak fourteen inches, containing galena and brittle silver, assaying from 80 to 125 ounces silver per ton, in a quartz gangue; developed by two shafts ten and fifteen feet in depth.

**Slip-up.**—T. A. Perkins, Idaho Springs, C. A. Huston and H. T. Huston, both Philadelphia, owners; claim 1500x300 feet; situated on Montezuma Mountain, Tomichi district, three miles from Tomichi; located August 2, 1882; vein a fissure, with a crevice seven feet wide, containing gray copper, with ruby, native, and brittle silver, in a quartz gangue; developed by a shaft twenty feet deep.

**Smith Coal Bank.**—A. P. Smith and Abraham Heiligers, both Irwin, and Augustus Levi, Gunnison City, owners; claim covers 640 acres, containing several strata, or veins, of anthracite coal, varying in width from four to six feet.

**Smuggler.**—1500x300 feet; situated on Gold Hill, Tin Cup district, about four miles from Tin Cup; vein a contact varying in width, containing copper carbonates and lead sulphides in a lime and porphyry gangue, assaying from 50 to 150 ounces silver per ton, and promising fairly.

**Snow-ball.**—I. N. Barrett and T. B. Jones, both Buena Vista, Colo., owners; claim 1500x300 feet; situated on Texas Creek, East and Middle Texas district, eighteen miles from Buena Vista; located in 1881; vein a fissure, with a crevice twenty feet wide, containing quartz streaked with galena, assaying eighty-eight ounces silver per ton; developed by a shaft ten feet in depth and a tunnel fifteen feet in length.

**Snow-bird.**—Nelson Johnson, H. Hackley, and W. Taylor, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1879; vein a contact, with a crevice four feet wide, and a pay streak one foot, containing galena and black sulphurets, assaying 800 ounces silver per ton, in a quartz gangue; developed by a tunnel 140 feet in length and four shafts aggregating fifty feet in depth.

**Snow-flake Group.**—J. B. Johnson, Pitkin, E. W. K. Pierce, Denver, and M. Wright, Chicago, owners; group comprises the Snow-flake, King-bolt, Rosebud, and Stephens lodes, 1500x300 feet each; situated on Little Ohio Creek, Quartz Creek district, six miles from Pitkin; located in 1880; veins all fissures, with crevices from two to four feet wide, containing a gold-bearing ore, which mill-runs, when sorted, two ounces gold per ton; developed by four shafts from twelve to sixty-five feet in depth.

**Snow Mass.**—(See John Henry Group.)

**Soladad.**—(See Croxton-Harper Prospecting and Mining Company.)

**South Park.**—A. M. Stevenson and D. T. Stapp, both Pitkin, and D. C. Root, Denver, owners; claim 1500x300 feet; situated on the south fork of Quartz Creek, Quartz Creek district, four and one-half miles from Pitkin;

located in 1882; vein a fissure, with a crevice four feet wide, containing quartz carrying galena and copper, which assays forty-five ounces silver per ton; developed by a shaft twenty-five feet in depth.

**Spar Chief, Johnny Bull, and Johnny Bull Extension.**—S. Morris, Irwin, Colo., A. O. Elliott, Dexter, Kan., and J. E. Wood and J. A. Derby, both Larned, Kan., owners; claims 1500x300 feet; situated in Democrat and O-Be-Joyful Basins, Ruby district, four miles from Irwin; located in 1880; veins all fissures, with crevices from four to eight feet wide, and pay streaks from six to ten inches, containing galena and gray copper, with silver glance and some native silver, assaying one ounce gold and seventy-three ounces silver per ton, in a quartz gangue; developed by three shafts, sixteen, twenty-five, and thirty feet in depth, respectively.

**Square and Compass and Poor Boy.**—Victor C. Anderson and G. W. Andrews, both Crested Butte, and F. S. Gage, Larned, Kansas, owners; claims 1500x300 feet each; situated on Crystal Mountain, Elk Mountain district; located in June, 1880; veins both contacts, with mineral streaks ten inches wide, containing galena and black sulphurets, assaying 303 ounces silver per ton, in a quartz gangue; developed by a tunnel on the vein thirty feet in length.

**St. Elmo and No Name.**—J. F. Barnes, S. R. Royster, C. H. Chilles, and Geo. C. Chilles, all Crested Butte, owners; claims 1500x300 feet each; situated in Poverty Gulch and in Dark Cañon, Elk Mountain district, ten miles from Crested Butte; located in 1880; veins both fissures, with crevices from two to four feet in width, and pay streaks from fourteen to twenty inches, containing galena, gray copper, and black sulphurets, assaying 139 ounces silver per ton, in a quartz gangue; developed by a tunnel forty feet in length.

**St. George.**—I. P. Cartwright, Weston, Mo., owner; claim 1500x300 feet; situated in Redwell Basin, Ruby district, three miles from Irwin; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak twenty-three inches, containing argentiferous galena, assaying 100 ounces silver per ton, in a quartz gangue; developed by a shaft eighteen and one-half feet in depth.

**Standard.**—Nelson Johnson, Tin Cup, owner; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, two and one-half miles from Tin Cup; located in 1870; vein a contact, with a crevice four feet wide, and a pay streak from six to twelve inches, containing galena and sulphurets, assaying from 75 to 600 ounces silver per ton, in a quartz gangue; developed by two tunnels forty feet long each.

**Star of Hope.**—N. Shurtliff and Tabor Bros., all Irwin, owners; claim 1500x300 feet; situated on Ruby Peak, Ruby district, two miles from Irwin; located in 1879; vein a fissure, with a crevice twelve feet wide, and a pay streak from six to thirty inches, containing galena with ruby silver, assaying fifteen per cent lead and sixty-seven ounces silver per ton, in a quartz gangue; developed by a shaft thirty feet in depth.

**Staten Island.**—S. P. Spencer, A. C. Snider, and W. Rose, all Irwin, owners; claim 1050x300 feet; situated in Ruby Basin, Ruby district, three-fourths mile from Irwin; located in 1879; vein a fissure, with a crevice fourteen feet wide, and a pay streak from six to thirty inches, containing quartz and argentiferous galena; developed by a shaft twenty-two feet in depth and an eleven-foot open cut.



**Sunlight.**—W. P. Babbitt, Wm. Meredith, and Richard Ducatt, all Pitkin, owners; claim 1500x300 feet; situated on Cumberland Ridge, Quartz Creek district, three miles from Pitkin; located in 1882; vein a fissure, from with a pay streak fifteen inches wide, containing gold-bearing quartz, assaying one to seven ounces gold per ton; developed by a shaft twenty feet in depth and a tunnel fifteen feet long.

**Sunnyside.**—Frank Carlin and George Knight, both Pitkin, owners; claim 1500x300 feet; situated in Jones' Gulch, Quartz Creek district, four and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice from two to four feet in width, containing gold-bearing quartz, which assays from one to two ounces gold per ton; developed by a sixty-foot incline.

**Surprise.**—C. H. Cornwell and J. F. McPherson, both Pitkin, owners; claim 1500x300 feet; situated on the north side of Hall's Gulch, between the Mineral Farm and Silent Friend properties, Quartz Creek district, five miles from Pitkin; located in 1880; vein a fissure, with a crevice from one to four feet wide, containing quartz, galena, and iron, assaying $8 in gold and three ounces silver per ton; developed by a shaft fifty feet in depth.

**Sylvanite.**—(See Ruby Gold and Silver Mining Company.)

**Terrible.**—1500x300 feet; situated on Terrible Hill, Quartz Creek district; on which there is considerable development, showing a thirty-inch vein, containing a gold and silver bearing ore, from which a number of shipments were made, showing the value to be over $100 per ton.

**Thompson Coal Banks.**—Harold C. and Lee Thompson, Ira Borden, and others, all Irwin, Colo., owners; claim covers 960 acres; situated at the head of Anthracite Creek, two and one-half miles south of Irwin; located in 1879; containing veins, or strata, of anthracite coal, varying in thickness; developed by three drifts, 80, 200, and 300 feet in length, with some other workings.

**Tin Cup.**—(Extension of the Gold Cup); John J. Mastin, Kansas City, Mo., owner; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, three and one-half miles from Tin Cup; located in 1878; vein a fissure bedded in limestone, with a crevice nine feet wide, and a pay streak two feet, containing chlorides and sulphurets in a lime gangue, milling, when sorted, from fifty to seventy ounces silver per ton; developed by a shaft 150 feet in depth, with some drifting; output about $50,000.

**Tin Cup Palcer.**—B. C. Gray and Samuel Gallagher, both Tin Cup, owners; claim covers twenty acres; situated in Tin Cup Gulch, Tin Cup district; located in 1861; developed by fifty feet of sluicing and four miles of ditching.

**Toledo.**—John Griffin, Crested Butte, and L. Kountz, Iowa, Colo., owners; claim 1500x300 feet; situated in Dark Cañon, Elk Mountain district, ten miles from Crested Butte; located in 1881; vein a fissure, with a pay streak twenty inches wide, containing galena and carbonates, assaying sixty-eight per cent lead and fifty-six ounces silver per ton, in a decomposed gangue; developed by a tunnel fifty feet in length.

**Toronto.**—James Beardsley, C. W. Fuller, James Rabdan, and John B. Baker, all Pitkin, owners; claim 1500x300 feet; situated on the south slope of Bunker Hill, Quartz Creek district, three miles from Pitkin; located in June, 1882; vein a contact, with a crevice seven feet wide, and a pay streak

from six to thirty inches, containing galena and carbonates, milling, when sorted from the gangue-matter, sixty-two ounces silver per ton; developed by a shaft sixty-five feet in depth; output twenty tons.

**Two Pilgrims.**—(See Armstrong Gulch Consolidated Silver Mining Company.)

**Uncle Rufus.**—L. D. Wilson, B. A. Ledford, Henry Conroy, and Robt. Clapp, all Pitkin, owners; claim 1500x300 feet; situated on German Flats, Quartz Creek district, three miles from Pitkin; located in 1882; vein a contact, with a crevice two and one-half feet wide, containing quartz, galena, and iron pyrites, assaying one and one-half ounce gold and twenty-seven ounces silver per ton; developed by a shaft sixty-five feet in depth.

**Uncle Sam.**—(See San Juan and Uncle Sam.)

**Uncle Sam.**—Geo. Young and John Paden, both Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, four miles from Tin Cup; located in 1881; vein a contact, with a pay streak twenty inches wide, containing iron carbonates, assaying thirty ounces silver per ton; developed by a shaft eighteen feet in depth.

**Union Park Gold Mining Company (The).**—Incorporated under the laws of Colorado; president, John Harrison; vice-president, John Dutro—both St. Louis; secretary and treasurer, H. C. Donnell, Leadville; superintendent, P. McCann, Tin Cup; offices Tin Cup and Leadville; owns the Union Park, Anna, and Nellie placers, covering 480 acres; situated in the Tin Cup district, six miles west of Tin Cup; located in 1861; developed by 2,000 feet of piping and four miles of ditching; worked by hydraulic pressure.

**Ute Group.**—Thomas Jones and Richard Tovey, both Crested Butte, and D. C. Scribner, Gunnison City, owners; group comprises the Ute, Privateer, Red Cloud, and Little Alice lodes, 1500x300 feet each; situated on Copper Mountain, and in O-Be-Joyful Basin, Ruby district, five miles from Ruby; located in 1880; containing four fissure veins, from four to six feet in width, containing quartz and galena, with gray copper and silver glance, assaying 455 ounces silver per ton; developed by three tunnels, twenty-two, thirty, and forty feet in length, and three shafts ten feet long each.

**Van Wert.**—M. J. Magee, Hancock, W. V. Davenport, T. W. Berry, and J. C. DeGroot, all Tomichi, J. H. Kellogg, Maysville, and W. J. Manley, Dalton, Ga., owners; claim 1500x300 feet; situated on the west slope of Monumental Mountain, Tomichi district, two miles from Tomichi; located in 1881; vein a fissure, with a crevice three feet wide, and a pay streak from six to eighteen inches, containing galena and sulphurets, assaying 100 ounces silver per ton, in a quartz gangue; developed by a shaft forty feet in depth and a tunnel fifteen feet in length.

**Virginia.**—Taylor, Gallagher, Parker, and Carmichael, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district, three miles from Tin Cup; located in 1882; vein a contact, with a crevice four feet wide, containing iron carbonates, assaying from twenty-five to fifty ounces silver per ton, in a decomposed gangue; developed by three shafts aggregating forty-five feet in depth.

**Virginia City Mining and Smelting Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, S. S. Chapman; secretary and treasurer, F. T. Wheeler; superintendent, L. H. Little; offices Chicago and Tin Cup; owns a Smelter, situated at Tin Cup; main building 80x50 feet; containing complete smelting and sampling machinery, with the necessary motive power, and a capacity to treat forty tons in twenty-four hours.



**Virginia Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, T. M. Avery; vice-president, T. W. Harvey; treasurer, Samuel W. Allerton; secretary, J. M. Cutter; general manager, C. O. Avery—all Chicago; offices Room 20 Granite Building, Chicago, Ill., and Gothic; owns the Virginia Group, comprising the Virginia and West Virginia, 1500x300 feet each, and the Virginia Tunnel site, 3000x6 feet; situated on Yank's Peak, Elk Mountain district, three-fourths mile from Gothic; located in 1879, and patented; vein a fissure, with a crevice eight feet in width, containing ruby and wire silver and black sulphurets in a quartz gangue, which mill-runs, when sorted, 184 ounces silver per ton; developed by a tunnel 630 feet in length, a shaft 129 feet deep connecting with a seventy-foot drift, and seventy-foot incline also connecting with other workings; output 300 tons.

**Virginius.**—1500x300 feet; situated on Red Mountain, Elk Mountain district; vein a fissure, cutting across the mountain, and varying in width, containing galena and sulphurets, assaying from 25 to 100 ounces silver per ton; developed by a tunnel 375 feet long, with some other workings.

**Volunteer Mining Company.**—Incorporated under the laws of Iowa in August, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, C. E. Witham; vice-president, J. H. Pingrey; secretary, A. A. Coaling; treasurer, J. D. Walker—all Wilton, Ia.; general manager, T. J. Anderson, Knoxville, Ia.; offices Wilton Junction, Ia., and Pitkin, Colo.; owns the Volunteer lode, 1500x300 feet; situated on the south side of Jones' Gulch, Quartz Creek district, three and one-half miles from Pitkin; located in 1881; vein a fissure, with a crevice four feet wide, containing quartz carrying gold and silver, and assaying one and one-half ounces gold and fourteen ounces silver per ton; developed by two shafts thirty-five and forty-six feet in depth, and a cross-cut 111 feet long, cutting the vein, from which there is 100 feet of drifting; output 200 tons.

**Wait-a-while Group.**—John Campbell and James McCarthy, both Pitkin, owners; group comprises the Wait-a-while, Eggleston, Morgan, P. R., and Lake View lodes, 1500x300 feet each; situated on Boulder Creek, Quartz Creek district, eight miles from Pitkin; located in 1882; veins all fissures, with crevices from eighteen inches to five feet wide, and pay streaks from four to twelve inches, containing quartz, galena, and hematite iron, assaying one ounce gold and twelve ounces silver per ton; developed by five shafts ten feet deep each and a drift thirty feet in length.

**Wanderer and Senator.**—G. H. Whitelaw and John Kinkaid, both Tin Cup, owners; claims 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879, and patented; veins both contacts, with crevices four feet wide, containing iron carbonates and galena, assaying 150 ounces silver per ton, in a decomposed gangue; developed by three tunnels, 18, 20, and 100 feet in length.

**Wanderer's Last Chance Mining Company (The).**—Incorporated under the laws of Michigan; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; owns the Wanderer's Last Chance lode; situated on American Mountain, Tin Cup district, three miles from Tin Cup; the developments—200 feet of tunnels and a shaft 100 feet in depth, showing a fissure vein, varying in width, and containing a fair material; and a placer near the lode claim.

**War Eagle, Laodicea, and Scottish Chief.**—Three claims, 300x1500 feet each; situated on Horseshoe Mountain, Tin Cup district; for the development of which two cross-cuts are run, intersecting the veins at considerable depth, and showing copper (native and carbonate) and galena, both assaying fairly.

**Warner Coal Bank.**—(See Philadelphia Coal and Silver Mining Company.)

**Waverly.**—B. N. Burdick and J. F. Spaulding, both Irwin, owners; claim 1500x300 feet; situated in Ruby Basin, Ruby district, one half mile from Irwin; located in 1881; vein a fissure, with a crevice four and one-half feet wide, and a pay streak twenty inches, containing galena, zinc blende, and copper, assaying fifty ounces silver per ton, in a quartz gangue; developed by a shaft fifteen feet in depth.

**Waterman Stamp-Mill.**—Herbert Waterman, general manager; building 50x40 feet, situated on Ohio Creek, at the mouth of Jones' Gulch, near Pitkin, containing twenty Stamps and eight Plates; motive power supplied a twenty-five-horse-power engine, and also water-power; capacity from twenty-five to thirty tons of ore in twenty-four hours.

**Wellington.**—John Curry, Jonathan Wright, and E. Himrod, all Pitkin, owners; claim 1500x300 feet; situated on Green Mountain, near the Governor St. John mine, Quartz Creek district, six miles from Pitkin; located in 1881; vein a fissure, with a crevice four feet wide, containing quartz and galena, assaying ten ounces silver per ton; developed by a shaft ninety feet in depth.

**West Willow.**—A. J. Babcock, Denver, G. S. Fallen and G. H. Whitelaw, both Tin Cup, owners; claim 1500x300 feet; situated on Anna Mountain, Tin Cup district, six miles from Tin Cup; located in 1880; vein a contact three feet wide, pay streak twelve inches, containing galena and sulphurets, assaying 140 ounces silver per ton; in a quartz gangue; developed by a shaft forty-five feet in depth.

**West Willow Placer.**—J. F. McGowan and C. A. Freeman, both Tin Cup, owners; claim covers 180 acres; situated on West Willow Creek, Tin Cup district; developed by 150 feet of fluming and some other workings.

**Westward-Ho! Vidette, and Wilson.**—John H. Wilson, Crested Butte, owner; claims 1500x300 feet each; situated on the north slope of Sheep Mountain, Elk Mountain district, eight miles from Scofield; located in 1880 and 1881; veins all fissures, with crevices from three to five and one-half feet in width, containing quartz and galena, with some black sulphurets, assaying from 100 to 800 ounces silver per ton; developed by two shafts ten feet deep each and two tunnels twenty feet long each.

**Wheel of Fortune Group.**—W. O. Mansen, Waverly, Ill., J. W. Virgil and C. F. Miller, both Leadville, and G. Fitzgerald, Irwin, owners; group comprises the Wheel of Fortune, Robt. Burns, Robt. Emmet, and Grand Union lodes, covering thirty-five acres; situated in Redwell Basin, Ruby district, three and one-half miles from Irwin; veins all fissures, with crevices from six inches to three feet wide, containing galena with ruby silver, assaying from 150 to 1,500 ounces silver per ton, in a quartz gangue; developed by a number of shafts from ten to thirty feet in depth.

**White Lily.**—G. H. Gilbertson, A. L. Brooks, Wm. McDonnell, and P. Garvey, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill; vein a contact, with a crevice six feet in width, containing iron carbonates and galena, assaying thirty-five ounces silver per ton, in a decomposed gangue; developed by one fifty-foot shaft.



**Whittemore.**—(See Mineral Farm Group.)

**Wick Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. C. Schoonmaker, Pittsburgh, Pa.; vice-president, Wm. J. McKinney, Cleveland, Ohio; treasurer and secretary, H. K. Wick, Youngstown, Ohio; general manager, Frank Morrison; offices Gunnison City and Youngstown; owns the Doctor Group, composed of the Doctor, Silver King, Silver Queen, Clara, Nick, Cora, Estelle, and Hough lodes, 1500x300 feet each; situated on Spring Creek, Spring Creek district, twenty-two miles from Gunnison City; located in 1880, and Doctor patented in 1882; veins all contacts, with crevices from eight to eighteen feet in thickness, containing sand carbonates, milling, when sorted from the gangue matter, fifty per cent lead and twenty ounces silver per ton; developed by three shafts, twenty-three, forty-two, and ninety feet in depth, a drift on the vein 220 feet long, and a sixty-five-foot cross-cut; output 500 tons.

**Wild Boy.**—D. C. Reese, James Laird, and H. Williams, all Pitkin, owners; claim 1500x300 feet; situated in Jones' Gulch, Quartz Creek district, four miles from Pitkin; located in 1882; vein a fissure, with a crevice three and one-half feet wide, and a pay streak six inches, containing gold-bearing quartz, assaying two and one-half ounces gold per ton; developed by a tunnel forty feet in length.

**William Henry.**—(See Field's Group.)

**Wm. Tell and Thanksgiving.**—Nicholas Millard, Pitkin, John Theobald, Gunnison City, and Geo. Stanfield, Texas, owners; claims 1500 x300 feet each; situated on the east slope of Gold Hill, Tin Cup district, three and one-half miles from Tin Cup; located in 1879; vein a contact, with a crevice two feet wide, and a pay streak from six to twenty inches, containing quartz and galena, assaying sixty ounces silver per ton; developed by a shaft twenty-five feet in depth and a tunnel thirty-five feet in length.

**Williams.**—John Currie, Jonathan Wright, and Hank Williams, all Pitkin, owners; claim 1500x300 feet; situated on Gold Ridge, at the head of Spring Gulch, Quartz Creek district, three and one-half miles from Pitkin; located in 1882; vein a fissure, with a crevice three feet wide, containing gold-bearing quartz, which assays eight ounces gold per ton; developed by a tunnel eighty-five feet in length.

**Willow Creek Reduction Company (The).**—Owns a Reduction-works, situated on Willow Creek, near Tin Cup, containing complete and improved machinery for the treatment of ores, with the necessary motive power.

**Windsor.**—(See Del Ray Mining Company.)

**Wisconsin Group.**—Alexander Riel, D. P. Fuller, T. F. McGiff, and C. B. Wilson, all Buena Vista, owners; group comprises the Wisconsin, Montpelia, Excelsior, Fairview, Argentum, and Wave lodes, 1500x300 feet each; situated on Bear Creek, Rock Creek district, two miles from Scofield; located in 1880; veins all fissures, with crevices from four to twelve feet in width, containing quartz and galena with native silver, assaying twenty-five per cent lead and forty-four ounces silver per ton; developed by a shaft on each lode twenty feet in depth.

**Wolverine.**—A. N. Perrault, H. G. Sutton, and C. A. Knapp, all Tin Cup, owners; claim 1500x300 feet; situated on Gold Hill, Tin Cup district; located in 1879; vein a contact, with a crevice three feet wide, and a pay streak twelve inches, containing galena and sulphurets, assaying ninety ounces silver per ton, in a quartz gangue; developed by two shafts twenty and fifty feet in depth.

**Wolverine.**—G. A. Jackson, Crested Butte, and Luke Sells, St. Louis, Mo., owners; claim 1500x300 feet; situated in Wolverine Gulch, Ruby district, four miles from Crested Butte; located in 1880; vein a contact, with a crevice six feet wide, and a pay streak from six to eighteen inches, containing galena and carbonates, milling, when sorted from the gangue-matter, thirty per cent lead and twenty ounces silver per ton; developed by a tunnel on the vein forty feet in length.

**World's-To-morrow Group.**—C. W. Honaker and O. Huston, both Gunnison City, and others, owners; group comprises the World's-To-morrow, Carbonate, Tough Nut, Boyton, Bob-tail, and Terrible lodes, 1500x300 feet each; situated on Bear and Sheep Mountains, Elk Mountain district; located in 1880 and 1882; veins all fissures, with crevices from two to six feet wide, containing quartz and galena, assaying sixty ounces silver per ton; developed by 1,500 feet of tunnels and shafts.

**Wright and Good Luck.**—Dr. —— Wright, R. P. Walker, M. G. Walker, B. F. Walker, and J. C. Irving, all Buena Vista, owners; claims 1500x300 feet each; situated on Grizzly Peak, near Taylor River, Silver Cliff district, thirty miles from Buena Vista; located in 1881; veins both contacts, with crevices from two to six feet in width, containing quartz carrying galena and chlorides, assaying two and one-half ounces gold and five ounces silver per ton; developed by a shaft thirty feet in depth and an open cut ten feet in length.

**Yankee Baldc.**—Lauren T. Baxter and John Cashion, both Crested Butte, and Wm. Johnstone, Gothic, owners; claim 1500x300 feet; situated in Poverty Gulch., Elk Mountain district, ten miles from Crested Butte; located in August, 1878; vein a fissure, with a pay streak nine inches wide, containing galena and gray copper, in a quartz gangue, milling, when sorted, fifteen per cent lead and fifty ounces silver per ton; developed by a tunnel on the vein twenty-five feet in length.

**Yankee Doodle.**—(See Pocahontas Mining Company.)

**Zacatakus Group.**—Five claims, 1500x300 feet each, viz.: Zacatakus, Victor, Honey-bee, Elizabeth, and Park View; situated on the east slope of Galena Mountain, two miles west of Elko Park, Elk Mountain district; located in June, 1879; owners Geo. W. Bittenbender, Telluride, B. F. Reagan, Gothic, and Thos. Thomas, Scofield; veins all fissures, from one to six feet wide, and pay streaks from four to forty inches, containing galena in a quartz gangue, assaying forty-five per cent lead and twenty-five ounces silver per ton; developed by one sixty-foot tunnel, one adit twenty-five feet long, and three shafts from twenty-five to fifty feet in depth.

# Hinsdale County.

This County was organized in 1874, and is bounded on the north by Gunnison, on the east by Saguache and Rio Grande, on the south by Conejos, and on the west by La Plata, San Juan, and Ouray. It covers an area of 1,404 square miles, and has an estimated population of 2,300, with Lake City as the county seat and chief center, situated far below the mines, in a broad and beautiful valley on the Lake Fork of the Gunnison River.

Hinsdale County is mountainous in the extreme, and its resources almost wholly derived from gold and silver mining. The formation may be described as eruptive, and the veins true fissures, except probably those situated on the flats near the summit of Engineer Mountain, in the Galena district. As to the character of those in the section named, Prof. J. Alden Smith, State Geologist, says: "Opinions differ; some insist that they are fissures, while others contend as obstinately for the bedded or deposit form. As I have not been favored with an opportunity for careful examination, I am unable to determine which of these views is correct. Cursory examination of the surface indications incline one to support the fissure theory, but the evidences underground, if correctly reported, are diametrically opposed to this conclusion." However this may be, the ores are mainly black oxides of copper, somewhat resembling furnace-matte, yielding, when sorted, from $50 to $500 per ton in gold and silver.

In the Lake Park and Sherman districts there are a few good mines and the customary percentage of prospects, many of which give promise of excellent results when thoroughly developed. The veins are wide and frequently contain a small percentage of gold, while in the Cimarron district, situated under the shadow of Uncompahgre Peak, the lodes carry the latter metal, principally. These, with the placers in that vicinity, have of late assumed quite a local importance.

The ores of Hinsdale County are, as a rule, medium grade, but the distance from a market and the insufficiency of local reduction facilities have retarded its progress. In 1881 the output aggregated $187,375, while in 1882 it advanced to $275,000; and with increased development and enlargement of the means of ore treatment, the product of 1883 will doubtless greatly exceed that of any previous year.

**Adams.**—(See Frank Adams.)

**Adonis.**—300x1500 feet; situated on the north-east slope of Sheep Mountain, three miles west of Capitol City, Galena district; located in September, 1880; owners Daniel McKenzie and John S. Campbell, both Capitol City; vein a fissure three and one-half feet wide, pay streak twelve inches, containing solid galena, averaging, by assay test, sixty per cent lead and twenty-two ounces silver per ton; developments—one ten-foot face cut and one twenty-foot drift.

**Amazon.**—300x1500 feet; situated on the south slope of Sheep Mountain, four miles west of Capitol City, Galena district; located in 1876; owners J. F. McDonald and Eli Du Fort, both Lake City; vein a fissure four and one-half feet wide, pay streak four feet, containing quartz carrying galena, assaying fifty per cent lead and thirty-two ounces silver per ton; developed by two tunnels sixty and thirty feet long.

**American Queen Group.**—Three claims, 300x1500 feet; situated on the south-west slope of Sheep Mountain, three-fourths of a mile north-east of Rose's Cabin, Galena district; located in 1878-9; owners M. J., M. Q., and Frank Elbert, all Lake City; veins all fissures, in American Queen and Black Diamond, two adjoining claims on the same vein, four feet wide, containing quartz carrying copper pyrites and galena, on which the assays show fifty per cent lead and from 25 to 100 ounces silver per ton; developments—one sixty-five-foot drift and a cut with a fourteen-foot face, on the former, a cross-cut thirty-five feet long, cutting the vein twenty-five feet deep, at which point there is twelve feet of drifting, and a shaft twelve feet deep; and in the Royal Prince from ten to eighteen inches wide, containing quartz carrying galena and copper pyrites, on which the assays show from 15 to 190 ounces silver and a trace in gold per ton; developed by a thirty-five-foot drift.

**Anchor.**—(See San Juan County.)

**Anchor.**—(Extension of H. M. Wood.); 300x150 0feet; situated on the north-east slope of Capitol Mountain, one-half mile west of Capitol City, Galena district; located in May, 1875; owners J. B. Search and James Haley, both Capitol City, and Thomas M. Field, Denver; vein a fissure thirty-two inches wide, containing quartz carrying galena, iron, and copper pyrites, assaying about thirty ounces silver per ton; developed by a fifty-foot drift.

**Argentine.**—300x1500 feet; situated in Cataract Gulch, one and one-half miles south-west of Sherman, Park district; located in 1879; owners C. H. Bent, Lake City, W. B. Bent, Steelton, Penn., and G. H. Casler, Chicago; vein a fissure forty inches wide, containing quartz carrying iron and copper pyrites and some ruby silver, on which assays show from zero to five ounces gold and from 100 to 250 ounces silver per ton; developed by 100 feet of drifting.

**Autocrat.**—300x1500 feet; situated in Alpine Gulch, three miles south-west of Lake City, Lake district; located in 1881; owners Mendenhall & Pride, J. F. McDonald, Thos. Griffin, and R. E. Peniston, all Lake City; vein a fissure four feet wide, pay streak from ten to eighteen inches, containing gray copper, galena, and zinc blende, on which the assays show from 5 to 750 ounces silver per ton, and probably averaging fifty-five ounces, in a quartz gangue; developed by a thirty-five-foot tunnel.

**Bald Eagle.**—D. M. Watson, Pitkin, and S. S. Watson, Silverton, owners; claim 1500x300 feet; situated on Red Mountain, Park district, about twenty miles from Lake City; located in 1875; vein a fissure three feet wide, containing quartz and galena, assaying from thirty to fifty ounces silver per ton; developed by a tunnel sixty-five feet long.

**Bay State and Hancock.**—Two adjoining claims on same vein, 300x1500 feet each; situated on the north side of Henson Creek, three-fourths mile west of Lake City, Lake district; located in 1879; owners H. L. Franklin and J. F. McDonald, both Lake City; vein a fissure six feet wide, containing quartz carrying galena and gray copper, assaying seventy ounces silver per ton; developments—one sixty-foot tunnel and one forty-foot shaft.



**Belle of La Crosse.**—300x1500 feet; situated on the north slope of Siegel Mountain, two miles south-east of Rose's Cabin, Galena district; located in May, 1881; owner Oscar S. Olson, Animas Forks; vein a fissure three and one-half feet wide, pay streak from ten to fourteen inches, containing galena and yellow copper, almost solid, milling ten per cent copper and twenty-five ounces silver per ton; developed by a twenty-five-foot shaft on the vein.

**Belle of the East.**—300x1500 feet; situated on the south-west slope of Two Belle Mountain, three miles south of Lake City, Lake district, and patented in 1882; owners J. W. Mills, Dr. J. Craig Miller, and E. D. Bouton, all Lake City; vein a fissure four and one-half feet wide, pay streak from four to eighteen inches, and averaging ten inches, containing galena, gray copper, and iron and copper pyrites, in a quartz and heavy-spar gangue, which mills, when sorted, three per cent copper and 200 ounces silver on first-class ore, ninety ounces silver on second-class, sixty ounces on third-class, and thirty ounces on fourth-class, and probably averaging sixty-five ounces silver and some gold per ton; developed by two tunnels 150 and 100 feet long, two shafts forty-five and seventy-five feet deep, and some stoping; shipments forty tons.

**Belle of the Union.**—300x1500 feet; situated in Vermilion Gulch, three-fourths mile north-east of Rose's Cabin, Galena district; located in June, 1881; owners M. J. and Frank Elbert, both Lake City; vein is supposed to be a fissure, containing a pay streak fourteen inches wide of galena, copper, and zinc, in a silicate-of-lime gangue, assaying from 15 to 100 ounces silver per ton; developed by one tunnel thirty-eight feet long, cutting the vein fifteen feet deep, on which there is nine feet of drifting; improvements—one shaft-house, in which there is a shaft six feet deep.

**Belle of the West.**—300x1500 feet; situated on the west slope of Two Belle Mountain, three miles south of Lake City, Lake district; owners John H. Maugham, Lake City, and others; vein a fissure about five feet wide, pay streak from four to eighteen inches, and probably averages ten inches, containing galena, gray copper, and iron and copper pyrites in a quartz and heavy-spar gangue, milling, when sorted, from 40 to 120 ounces silver per ton; the developments consisting of a number of shafts on the vein from 15 to 120 feet in depth and about 900 feet of drifting, with some stoping, showing large ore-reserves, with probably $40,000 worth on the dumps.

**Big Casino.**—300x1500 feet; situated in Casino Gulch, two miles east of Capitol City, Galena district; located in 1875, and patented in 1882; owners Mrs. W. T. Forrest, Henry L. Davis, H. C. Clark, and ——Haley, all Cincinnati; vein a fissure, from four to five feet wide, containing galena and gray copper in a quartz gangue, milling, when sorted, thirty per cent lead and 20 ounces silver per ton; developed by a tunnel 160 feet long and a sixty-five-foot shaft; property is under lease to A. M. Forrest, Samuel Wendel, and C. H. Bent, all Lake City.

**Black Eagle.**—300x1500 feet; situated on the Lake Fork slope of Two Belle Mountain, two and one-half miles south of Lake City, Lake district; located in 1874; owners Henry Kohler, Lake City, and Jno. Slaughter, Ouray; vein a fissure, three and one-half feet wide, pay streak five inches, containing a copper ore, averaging, by assay test, fifteen per cent copper and ninety ounces silver per ton; developed by a sixty-foot shaft and a twenty-foot level from the bottom of the shaft.

**Black Sulphuret.**—300x1500 feet; situated on the north-east slope of Engineer Mountain, one mile west of Rose's Cabin, Galena district; located in September, 1880; owner Louis Weinberg, Lake City; vein a fissure twenty

feet wide, containing a chimney apparently twenty feet wide, composed of crystallized gray copper, iron and copper pyrites, and black sulphurets, in a quartz gangue, assaying $70 per ton in silver and copper; developments—one fifteen-foot-face cut and one ten-foot tunnel from end of cut.

**Black Wonder Extension.**—300x1500 feet; situated on the Lake Fork of the Gunnison River, one-fourth mile north-west of Sherman, Park district; located in 1880; owner J. W. Brockett, Lake City, H. W. Lewis, Wichita, Kas., and Amos Houk, Santa Fé, N. M.; vein a fissure thirty inches wide, composed of quartz carrying gold and silver, on which a mill-run of closely sorted ore (500 pounds) showed $150 per ton; developed by a tunnel eighty-five feet long, cutting the vein 150 feet deep, on which there is twenty feet of drifting.

**Blue Wave.**—300x150 feet; situated on the east side of Alpine Gulch, four miles south-west of Lake City, Lake district; located in January, 1882; owners Dr. J. Craig Miller, James Carruthers, and Knight Brown, all Lake City; vein a fissure, with a pay streak twenty inches wide, containing heavy blue quartz, on which one assay showed eigteen ounces silver per ton; developments—one ten-foot shaft.

**Bob. Ingersoll.**—300x1500 feet; situated in Monument Gulch, three miles north-east of Lake City, Lake district; located in May, 1880; owners Louis Weinberg and P. G. Dawson, both Lake City; vein a fissure five feet wide, pay streak fifteen inches, containing quartz and iron pyrites, assaying from one to two ounces gold and from ten to fifteen ounces silver per ton; developments—an open cut, with a fifteen-foot face.

**Bonanza, Rising-sun and Setting-sun.**—The two first adjoining claims on the same vein, and the last parallel, 300x1500 feet each; situated at the head of Cimarron Creek, three miles north-west of Uncompahgre Peak, Cimarron district; located in August, 1882; veins both fissures, three and ten feet wide, respectively, composed of quartz carrying gold and silver, assaying $35 per ton; developed by two open cuts, one on each claim, with faces from fifteen to twenty-five feet; owner J. C. Love, Rico.

**Bourbon County.**—300x1500 feet; situated in Horseshoe Basin, two and one-half miles east of south from Rose's Cabin, Galena district, and patented in 1881; owner F. P. Dimpfel, New York City; vein a fissure, five feet wide, containing galena in a quartz gangue, assaying an average of forty per cent lead and twenty ounces silver per ton; developed by one fifty-foot shaft on the vein.

**Buckeye.**—300x1500 feet; situated on the south-west slope of Two Belle Mountain, three miles south of Lake City, Lake district; located in 1880; owners J. F. McDonald and Geo. O'Bannon, both Lake City; vein a fissure three and one-half feet wide, pay streak fourteen inches, containing galena in a quartz gangue, assaying twenty ounces silver per ton; developed by two shafts ten and twenty feet deep.

**Burro.**—300x1500 feet; situated on the south slope of Ocean Wave Mountain, seven miles west of Lake City, Galena district; located in 1876; owners C. F. Hilgenhaus, Moritz Stockder, and Wm. Heinrichs, all Lake City, and J. H. Haverly, Chicago; vein a fissure twenty inches wide, containing steel galena in a quartz gangue, on which a mill-run of one ton (sorted ore) showed forty per cent lead and twenty-six ounces silver per ton; developments—one twenty-two-foot drift, one sixteen-foot shaft, two open cuts with faces from ten to fifteen feet, and two tunnels twenty-five and thirty feet long.



**Carbonate Placer.**—Thirty-four acres; situated on the American Flats (Engineer Mountain), surrounding the Frank Hough mine, three miles west of Rose's Cabin, Galena district, and patented in 1883; owners J. C. Bell, Hugh J. Alexander, Arthur P. Cook, George P. Chiles, Dr. S. C. Dunkle, Louis Kafka, H. G. May, and Alfred Schiffer, all Lake City, and James H. Smith and B. J. Smith, both Denver; developments—one shaft fifty-two feet deep, showing a horizontal strata of mineralized matter fifteen inches thick and similar in character to third-class Frank Hough ore.

**Cebolla.**—300x1500 feet; situated on the north side of Silver Creek, three miles east of White Cross, Park district; located in 1876; owners C. F. Hilgenhaus, John Maurer, B. W. Felder, and Jos. Hohisel, all Lake City; vein a fissure four and one-half feet wide, pay streak four inches, containing gray copper, assaying 111 ounces silver per ton, in a quartz gangue; developed by two tunnels eighteen and twenty-five feet long.

**Champion.**—(Formerly Del Norte); 300x1500 feet; situated on the east slope of Del Norte Mountain and in Burrows' Park, six miles west of Sherman, Park district; located in 1879; owned by J. A. and E. A. Williams, both Animas Forks, Wm. Richards, White Cross, and A. C. Hart, Louis Kafka, and Moritz Rich, all Lake City; vein a fissure twelve feet wide, pay streak seven feet, containing iron and copper pyrites in a quartz gangue, about four feet of which is almost solid, milling, when sorted, thirteen per cent copper, twenty ounces silver, and a trace of gold per ton, at the surface, but at a depth of 100 feet the iron decreases and the copper increases to from twenty to twenty-five per cent; developed by a shaft 125 feet deep and two open cuts with faces from fifteen to twenty feet, and another open cut, crossing the vein, thirty feet long and fifteen feet deep.

**Cleveland.**—300x1500 feet; situated on the south side of Henson Creek, one mile west of Lake City, Lake district; patented in 1882; owners Jno. H. Maugham, Lake City, C. R. Fitch, Elmira, N. Y., and C. O. Evarts, Cleveland, Ohio; vein a fissure four and one-half feet wide, pay streak ten inches, containing galena, assaying an average of sixty per cent lead and fifty ounces silver per ton, and some ruby silver yielding much higher, with a quartz gangue; developed by a forty-five-foot shaft and a cross-cut tunnel forty feet long, designed to cut the vein fifty feet deep.

**Come-Up.**—300x1500 feet; situated on the south side of Henson Creek, one mile from Lake City, Lake district; located in 1881; owners Thos. Burr and Wm. Raaka, both Lake City; vein a fissure two and one-half feet wide, pay streak twelve inches, containing galena and some brittle silver in a quartz gangue, assaying thirty ounces silver per ton; developments—one twenty-five-foot shaft.

**Compromise.**—300x1500 feet; situated on the north side of Henson Creek, four miles west of Lake City, Lake district; located in 1882; owner Joseph K. Mullin, Lake City; vein a fissure five feet wide, containing quartz and galena with gray copper, milling, when sorted, thirty-five per cent lead and twenty ounces silver per ton; developments—one tunnel 100 feet long, and one shaft fifty-five feet deep, connecting the surface with the tunnel at a depth of forty feet, and a tunnel sixty-five feet long, designed to cut the vein at a depth of 260 feet.

**Consolidated Sheep Mountain Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, James E. Campbell, Hamilton, O.; vice-president, Wm. Rousheim, Cincinnati, O.; secretary, H. L. Morey, Hamilton, O.; treasurer, S. P. Woodward, Franklin, O.;

offices Lake City, Colo., and Hamilton, O.; owns four patented claims 300x1500 feet each; situated on the south slope of Sheep Mountain, eleven miles west of Lake City, Galena district, viz.: U. S., Empire, and High Muck-a-muck, three adjoining claims on the same vein; the first located in 1875, and the last two in 1880; vein a fissure six feet wide, pay streak twenty inches, containing galena and iron and copper pyrites, assaying twenty ounces silver per ton, in a quartz gangue; developed, respectively, by a cut fifty feet long with a forty-foot face, a cut fifty feet long with a twenty-foot face, and a twelve-foot shaft with two twelve-foot-face cuts; and the Highland Chief (extension of the Independence); located in 1880; vein a fissure from two to five feet wide, pay streak twenty-six inches, containing galena and iron pyrites in a quartz gangue, milling, when sorted, thirty per cent lead and ten ounces silver per ton; developed by one cut sixty feet long with a seventy-foot face and a tunnel fifty feet long, designed to cut both veins.

**Crooke's Mining and Smelting Company.**—(*Limited*); Incorporated under the laws of New York, May 1, 1882; capital stock $1,500,000, in 15,000 shares of $100 each; chairman of the board of directors, J. T. Rogers, London, Eng.; managing director, Jno. J. Crooke, Lake City; office Dashwood House, London, Eng., and Lake City, Colo.; owns five patented claims, 300x1500 feet each; situated on both sides of Henson Creek, three miles west of Lake City, Galena district; veins all fissures, as follows: Ute from five to seven feet wide, pay streak from two and one-half to four feet wide, containing galena with some gray and yellow copper in a quartz gangue, which mills, when sorted, fifty per cent lead and from twenty to twenty-five ounces silver per ton; developed by three levels, with connecting shafts and winzes, and one tunnel cutting vein 200 feet deep and running into the lower level, the entire workings aggregating 2,000 feet, besides a large amount of stoping; output twenty-two tons per day; Ulé from five to seven feet wide, pay streak from twelve to thirty-six inches, containing galena, gray and yellow copper in a quartz gangue, which mills, when sorted, thirty-five per cent lead and from thirty-five to sixty ounces silver in the lower workings, and from twenty to twenty-five ounces in the upper workings; developed by seven levels aggregating 2,700 feet, with 1,000 feet of connecting shafts, and winzes aggregating 1,500 feet, together with a large amount of stoping; output thirty tons per day; and for the working of both these mines there is an eight inch Cornish Pump, Hoisting-engine, and a Rock-drill Plant of six drills; Ulé Extension from five to seven feet wide, pay streak from twelve to thirty-six inches, containing galena, gray and yellow copper similar to the Ulé ore; developments—several openings on the vein; Annie (extension of Ute) from five to seven feet, with a pay streak presumably the same width as Ute, and containing the same kind of ore; developments—several openings on the vein; and Enterprise and other claims, on which the Company is doing development work.

Also owns a concentrator, situated on Henson Creek, at the mines; building 65x130 feet, containing one main Rock-breaker 10x15, two smaller Rock-breakers 8x10 each, ten Sizing-screens, twelve Plunge Jigs, four Cornish Rolls, and two Buddles; motive power supplied by a 160-horse-power Leffel Turbine Wheel; capacity 200 tons per day (twenty-four hours); and a Smelting Plant, originally erected by Fraser & Chalmers, Chicago; situated at Granite Falls, three-fourths mile south of Lake City, consisting of five reverberatory furnaces, one ton each, with stacks, etc., two calcining furnaces 55x13, one slagging furnace, four cupelling furnaces, with desilverizing and refining plant, one stack furnace, water-jackets, etc.; capacity ten tons of bullion per day (twenty-four hours).

**Crown Point.**—300x1500 feet; situated in Shaffer's Basin, two and one-half miles south-west of Capitol City, Galena district; located in May, 1879; owned by G. B. Gregory, Capitol City, and Oscar Downtain, Rockwood; vein a fissure five feet wide, pay streak eleven inches, containing decomposed products from galena, on which assays have been obtained from 27 to 103 ounces silver per ton; developed by a thirty-foot drift.



**Czar.**—300x1500 feet; situated on the south-west slope of Yellowstone Mountain, one-half mile north of Capitol City, Galena district; vein a fissure five feet wide, pay streak from twelve to twenty-four inches and widening with depth, containing galena in a quartz gangue, assaying fairly; developed by one sixty-foot shaft.

**Del Norte.**—(See Champion.)

**Dick Dawson.**—300x1500 feet; situated on the south side of Henson Creek, one mile east of Rose's Cabin, Galena district; located in February, 1881; owners Dr. J. Craig Miller, Louis Kafka, Hugh J. Alexander, and Wm. Austin, all Lake City, and Ed. Haley, Delta; vein a fissure five feet wide, pay streak from fifteen to twenty-four inches, containing galena, gray copper, and some zinc blende, milling, when sorted from the gangue-rock, thirty per cent lead and forty-five ounces silver per ton; developed by a tunnel sixty feet long, cutting the vein eighty feet deep, and four open cuts, with faces from ten to fifteen feet.

**Earle.**—(See Grand Central and Earle.)

**Eighty-One.**—(Formerly Piute); 300x1500 feet; situated in Owl Gulch, five and one-half miles west of Lake City, Lake district; located in January, 1881; owners J. W. Mills, Dr. J. Craig Miller, J. L. Kinsey, and E. D. Bouton, all Lake City; vein a fissure two feet wide, pay streak from three to eight inches, containing galena, oxide of iron, and gray copper, in a heavy-spar gangue, on which the assays show from 8 to 420 ounces silver per ton; developed by one twenty-five-foot shaft and one 125-foot tunnel, designed to cut the vein 100 feet deep.

**Emperor Wilhelm.**—(Extension of Wyoming); 300x1500 feet; situated on the north-east slope of Engineer Mountain, two and one-half miles west of Rose's Cabin, Galena district, and patented in 1883; owners J. W. Mills, E. I. Stirman, Dr. J. Craig Miller, and E. D. Bouton, all Lake City; vein a fissure five feet wide, pay streak from two to ten inches, containing galena and iron pyrites in a quartz gangue; developed by a tunnel 160 feet long and a shaft twenty feet deep.

**Engineer.**—Olin O. Larson, Del Norte, and N. Y. Portus, Rose's Cabin, owners; claim 1500x300 feet; situated on Engineer Mountain, Galena district, sixteen and one-half miles from Lake City; located in 1880; vein is probably a bedded one, with a crevice fifteen feet wide, and a pay streak from three to thirty inches, containing quartz carrying native, brittle, and ruby silver, assaying from 59 to 137 ounces silver per ton; developed by a shaft thirty-two feet in depth.

**Engineer Mountain Placer.**—Thirty acres; situated on American Flats (Engineer Mountain), three miles west of Rose's Cabin, Galena district, and patented in 1883; owners Arthur P. Cook, J. C. Bell, Dr. S. C. Dunkle, Hugh J. Alexander, Jno. Maurer, W. G. Luckett, Geo. P. Chiles, and D. S. Hoffman, all Lake City; developments one seventy-five-foot shaft.

**Evening Glory.**—300x1500 feet; situated in Ocean Wave Gulch, two miles from Capitol City; located in January, 1883; owners James Lyons, Michael Lucky, Jno. Bergin, and Richard O'Donnell, all Lake City; vein a fissure eighteen inches wide, pay streak from one-half to one and one-half

inches, containing gray copper, chlorides, and some galena, assaying from 50 to 700 ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut.

**Evening Star.**—300x1500 feet; situated at the head of Alpine Gulch, six and one-half miles south-west of Lake City, Galena district; located in 1876; owners Alonzo Wright and J. P. Richardson, both Lake City, and others; vein a fissure five feet wide, containing quartz carrying gray copper, which mills, when sorted, ten per cent copper and from twenty-five to thirty-five ounces silver per ton; developed by four open cuts ten feet deep each.

**Euphemia.**—300x1500 feet; situated at the head of East Cimarron River, sixteen miles north-west of Lake City, Cimarron district; located in 1881; owners W. L. Roberts, H. M. Corey, and Chas. R. Brooks, all Lake City, and Wm. Rogers, Sears, Mich.; vein a fissure five feet wide, pay streak twenty-two inches, containing mineralized feldspathic rock, on which assays have sometimes been very low and at others very high, both in gold and silver; developed by one shaft fifty feet deep, and promising well.

**Excelsior.**—300x1500 feet; situated on the south side of Henson Creek, one mile west of south from Lake City, Lake district; located in 1878; owner C. Patz, Lake City; vein a fissure four feet wide, pay streak fourteen inches, containing gray copper, with some brittle silver, in a quartz gangue, assaying from 20 to 300 ounces, and probably averages forty ounces silver per ton; developed by a shaft seventy feet deep.

**Excelsior.**—300x1500 feet; situated on the south slope of Yellowstone Mountain, one-third mile north of Capitol City, Galena district; located in April, 1878; owned by Geo. W. Adams, Farmington, Iowa, and W. B. Owen, Capitol City; vein a fissure six feet wide, containing quartz carrying gray copper, galena, iron, and zinc, assaying thirty ounces silver per ton; developed by a forty-five-foot shaft on the vein.

**Fannie.**—300x1500 feet; situated on White Cross Mountain, two miles south-east of White Cross, Park district; patented in April, 1883; owners J. W. Mills, Lake City, Jas. F. Steinbeck, Animas Forks, and Joseph Cover, Washington, D. C.; vein a fissure thirty feet wide, containing several pay streaks from fourteen to twenty-four inches, and aggregating from forty-five to sixty inches in width, containing galena and copper and iron pyrites in a quartz gangue, assaying sixty per cent lead and from ten to thirty ounces silver per ton; developed by a fifty-foot drift and a fifteen-foot-face open cut.

**Fanny Fern.**—300x1500 feet; situated on the south side of Henson Creek, one and one-half miles south-west of Lake City, Lake district, and patented in 1882; owners E. I. Sterman, M. B. Gerry, Geo. O'Bannon, John W. Kraft, and J. F. McDonald, all Lake City, and Geo. W. Arnold, Colorado Springs; vein a fissure twenty inches wide, composed of quartz carrying gray copper, brittle silver, and iron pyrites, probably assaying 100 ounces silver per ton; developed by two shafts twenty-five and thirty feet in depth and a cut fifty feet long, with a sixteen-foot face.

**Fannie M.**—(See Nellie M. and Fannie M.)

**Flower of San Juan.**—(An extension of Polar Star); 300x1500 feet; situated on the north-east slope of Engineer Mountain, two miles west of Rose's Cabin, Galena district; patented in 1881; owners J. C. Bell, J. W. Mills, Hugh J. Alexander, Dr. J. Craig Miller, and E. D. Bouton, all Lake City, and Joseph Bock, Lancaster, Wis.; vein a fissure four feet wide, pay streak eighteen inches, containing antimonial silver in a quartz gangue, assaying from 20 to 1,000 ounces silver per ton, after sorting; developed by a twenty-five foot shaft and forty feet of tunneling.



**Ft. Scott, Ft. Wayne, and Little Emma.**—Three claims, 300x1500 feet each; situated on the east slope of Del Norte Mountain, twenty-two miles south-west of Lake City, Park district; located in January, 1882; owners J. R. DeLamar, New York City, and Seth Fairchild, Denver; veins all fissures from three to fifteen feet wide, pay streaks from four to twenty-four inches, containing quartz carrying gray copper and some brittle silver, assaying from thirty-five to seventy-five ounces silver per ton; developed by three adits, one on each claim, with ten-foot faces.

**Frank Adams.**—300x1500 feet; situated on the north side of Henson Creek, three-fourths mile north of Rose's Cabin, Galena district; patented in 1882; owners John S. Hough, Lake City, W. N. Ewing, Kansas City, Mo., and Hopkins & Bingham, Pueblo; vein probably a fissure, about fifty feet wide, composed of a quartz vein-matter, carrying pockets of a sulphuret ore, appearing at irregular intervals scattered through the vein, on which mill-runs of sorted ore have been obtained from 100 to 1,200 ounces silver per ton; developed by two shafts 50 and 100 feet deep and one tunnel fifty feet long.

**Frank Hough.**—300x1500 feet; situated on the American Flats (Engineer Mountain), three miles west of Rose's Cabin, Galena district, and patented in 1882; owners Jno. S. Hough, Jno. H. Maugham, A. E. Reynolds, all Lake City, and Henry C. Thatcher, Pueblo; the ore body is supposed to be a deposit; the developments—one shaft 275 feet deep, with drifts running therefrom as follows: at depth of fifty feet a drift thirty feet long, showing mineral on all sides for twelve feet; at depth of eighty feet thirty feet long, showing mineral on all sides for seventeen feet; at depth of 140 feet a drift thirty-nine feet long, showing mineral on all sides for twenty-five feet; at a depth of 200 feet two drifts, first thirty feet long, showing mineral for thirty feet on all sides, and second fifty-seven feet long, with room at end 10x20 feet, showing mineral on all sides; and at a depth of 260 feet two drifts, first sixty-five feet long, showing mineral at the end, and second thirty-four feet long, showing mineral on all sides, the same as before—that is, black oxide of copper, milling twenty-five per cent copper, fifty-six ounces silver, and $5 gold per ton; output 1,000 tons in doing the development work, and it is estimated that at least 10,000 tons of ore is now in sight.

**Georgia.**—300x1500 feet; situated on the American Flats, three miles west of Rose's Cabin, Galena district; located in May, 1882; owners Geo. E. Berry, Rose's Cabin, and Mrs. N. Weinberg, Lake City; vein probably a fissure, four feet wide, pay streak eighteen inches, containing decomposed sulphurets and galena, assaying seventy-five ounces silver per ton, in a decomposed gangue; developed by a twenty-five-foot tunnel on the vein.

**George Williams.**—(See Great Britain and George Williams.)

**Gnome Group.**—Five claims, 300x1500 feet each; situated in American Basin, three and one-half miles south-east of Animas Forks, Park district; owners James S. Decy, P. J. Cahill, and J. J. McGrath, all Silverton (Gnome lode owned by James S. Decy alone), Wm. J. Forsyth and Albert Bernard, both Howardsville, James Bernard, Daniel McKay, and George Ross, all Central City; group consists of Gnome, located in 1874, Gold Hill, extension of Gnome, located in June, 1881, Oro-Cash, located in July, 1881, Star, located in June, 1881, all lying parallel; veins all fissures, twelve, seven, seven, and fifteen feet wide, respectively, containing gold and silver bearing quartz carrying bismuth and tin, assaying in the two first an average of twenty-five per cent

copper, fifty ounces silver, and one-tenth ounce gold, but tests have been made as high as 1,388 ounces silver and one-half ounce gold per ton; and the Jno. W. Mackey, crossing the other claims; developments—on the Gnome one thirty-foot shaft, one open cut with seventy-five-foot face, and one twenty-foot tunnel from end of cut; on Gold Hill one open cut with a twenty-foot face and shaft from end of cut five feet deep; on Oro-Cash one eighteen-foot-face cut; on Star one fifteen-foot-face cut; on Jno. W. Mackey one twenty-foot-face cut and one six-foot shaft from end of cut.

**Golden Fleece.**—(Formerly Hotchkiss); 300x1500 feet; situated on the south side of the Lake Fork of the Gunnison River, four miles south of Lake City, Lake district; relocated in October, 1879, and patented in 1882; owners Chris. Johnson, Animas Forks, Samuel Wendel, Lake City, and Garland H. Davison, Baltimore, Md.; vein probably a fissure, about three and one-half feet wide, pay streak twenty-four inches, containing a tellurium ore in a quartz gangue, milling, when sorted, from $250 to $2,000 per ton in gold and silver; developments—one tunnel on the vein 130 feet long, from the bottom of which is sunk a twenty-eight-foot shaft and two cross-cuts, the first twenty-five feet long, cutting the vein fifty feet deep, at which point there is forty feet of drifting, and the second 190 feet long, cutting the vein 100 feet deep, at which point there is also forty feet of drifts; output 300 tons; and there is a good wagon road to the mine.

**Golden Fleece No. 2.**—300x1500 feet; situated on the west side of the Lake Fork of the Gunnison River, five miles south of Lake City, Lake district; located in April, 1881; owners Samuel Wendel and Geo. Wilson, both Lake City; vein is claimed to be a fissure, three and one-half feet wide, containing pockets of tellurium ore disseminated through a streak probably ten inches wide; developments—one shaft twelve feet deep.

**Golden Star.**—300x1500 feet; situated in Dead Man's Gulch, three miles south-east of Lake City, Lake district; located in June, 1880; owners Louis Weinberg and P. G. Dawson, both Lake City; vein a fissure six feet wide, pay streak twenty-four inches, containing gold-bearing quartz, assaying three ounces gold and sixteen ounces silver per ton; developments—an open cut and tunnel seventeen feet long, seven feet of which is under cover.

**Good Hope.**—300x1500 feet: situated on the north-east slope of Engineer Mountain, three miles west of Rose's Cabin, Galena district; located in 1882; owners H. L. Franklin, J. C. Bell, Arthur P. Cook, and Dr. S. C. Dunkle, all Lake City; ore body is probably a deposit, one shaft forty-five feet showing the same indications as the Polar Bear.

**Governor Group.**—Two claims 300x1500 feet each, viz.: Gov. Tabor and Gov. Allen; situated on the west side of the South Fork of Gunnison River, four miles south of Lake City, Lake district; located in 1882; owners Moritz Stockder, Lake City (C. Patz, Lake City, and James F. Steinbeck, Animas Forks, are owners in the latter); vein a contact, maximum thickness 300 feet, containing at irregular intervals boulders, or breccia of quartz and horn-stone, carrying tellurium, on which some very high and some very low assays have been obtained; developments—two open cuts with fifteen-foot faces each.

**Governor Pitkin.**—300x1500 feet; situated on the west side of the Lake Fork of Gunnison River, five miles south of Lake City, Lake district; located in 1881, and patented in 1882; owner Mrs. C. Patz, Lake City; vein a contact, miximum thickness 300 feet, containing at irregular intervals boulders, or breccia, of quartz and horn-stone, carrying tellurium, on which some very high and some very low assays have been obtained; developments—two shafts fifty and thirty feet deep, respectively.



**Grand Central and Earle.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north side of the Lake Fork of Gunnison River, two and one-half miles west of White Cross, Park district; located in 1877, and the former patented in 1882; owners C. H. Bent, Lake City (H. C. Thatcher, Pueblo, is an owner in the Grand Central, and N. P. Elsbree, Lake City, in the Earle); vein a fissure four feet wide, containing quartz carrying iron pyrites, gray copper and galena, assaying from 51 to 105 ounces silver per ton; developments—one fifty-foot shaft on the former, and a 110-foot cross-cut, cutting vein sixty feet deep on the latter.

**Grand View and Neoga.**—Two claims, 300x1500 feet each; situated on the north side of Henson Creek, three-fourths mile from Lake City, Lake district; located in 1877–8; owner Thomas S. Kirker, Lake City; veins both fissures, in the former three feet wide, pay streak nine inches, containing quartz and heavy spar carrying brittle silver and copper pyrites, assaying from twenty to eighty ounces silver per ton; developments—two ten-foot cuts and one thirty-foot shaft; and in the latter eight feet wide, containing twelve inches of baryta carrying some brittle silver and sulphates, assaying fifty ounces silver per ton; developments—one forty-seven-foot shaft and three open cuts.

**Great Britain and Georgie Williams.**—Two claims, 300x1500 feet each; situated on the east side of the Lake Fork of the Gunnison River at Lake City, Lake district; located in January, 1883; owner E. A. Williams, Lake City; veins both fissures, in the former five feet wide, containing quartz, in which appears tellurium ore impregnating the vein, assaying from twenty-three to twenty-six ounces silver per ton, and very high in gold; developments—two open cuts with twenty-five and ten foot faces and two shafts sixty and thirty feet deep; the last workings are also on the Georgie Williams, where the veins intersect each other, showing on the latter claim a vein four feet wide, containing quartz, in which appears tellurium ore disseminated through the vein, assaying fifty ounces silver per ton; developments—two cuts with twenty and ten foot faces.

**Great Western.**—(On Moro vein); 300x1500 feet; situated in Boulder Gulch, one and one-half miles south-west of Capitol City, Galena district; located in 1879; owners James Holmes, John Henderson, and Wm. Davy, all Capitol City; vein a fissure five feet wide, pay streak twelve inches, containing galena and gray copper, assaying sixty per cent lead, forty ounces silver, and from one-half to one ounce gold per ton, in a quartz gangue; developed by two tunnels 100 feet long each.

**Gray Copper.**—(Extension of Napoleon); 300x1500 feet; situated on the east slope of Del Norte Mountain, six miles west of Sherman, Park district; located in 1876; owners J. A. and E. A. Williams, both Animas Forks, Wm. Richards, White Cross, and Louis Kafka, Lake City; vein a fissure five feet wide, pay streak twelve inches, containing gray copper and galena, assaying 200 ounces silver per ton, in a quartz gangue; developed by a shaft on the vein sixty feet long.

**H. M. Woods.**—300x1500 feet; situated on the north side of Henson Creek, one-half mile west of Capitol City, Galena district, and patented in 1881; owners John S. Hough, John H. Maugham, and A. E. Reynolds, all Lake City, and Henry C. Thatcher, Pueblo; vein a fissure five feet wide, pay streak eighteen inches, twelve inches of which is galena, in a quartz gangue, milling, when sorted, fifty per cent lead and twenty ounces silver per ton, and six inches gray copper, milling sixty ounces silver per ton; developed by one tunnel 160 feet long and some other workings.

**H. Wilder.**—300x1500 feet; situated on the north side of Henson Creek, one and one-half miles west of Lake City, Galena district; located in 1876; owner J. W. Brockett, Lake City; vein a fissure four feet wide, with two pay streaks, one on each wall five inches wide each, containing gray copper and galena, assaying 100 ounces silver per ton, in a quartz gangue; developed by a tunnel forty feet long.

**Hancock Silver Mining Company (The).**—Incorporated under the laws of New Jersey, in April, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, Aaron Teller; secretary and treasurer, David Loewen—both Philadelphia, Pa.; offices 14 South Third street, Philadelphia, Pa.; owns the Hancock lode, 1500x300 feet; situated on Engineer Mountain, Galena district; vein a fissure from two to four feet in width, containing galena, assaying twenty-eight ounces silver per ton, in a quartz gangue-matter; developed by one fifty-foot shaft.

**Hannibal and Pacific.**—Two adjoining claims on the same, vein 300x1500 feet each; situated on the south side of Henson Creek, five and one-half miles west of Lake City, Lake district; located in March, 1882; owners M. J. and P. J. Carroll, both Lake City, and Gus Zacharias, Pittsburgh, Pa.; vein a fissure eight feet wide, containing galena and gray copper with iron and copper pyrites, assaying from 180 to 2,100 ounces silver per ton, in a quartz gangue; developments—one twelve-foot-face open cut, and a tunnel fifty-two feet long, designed to cut the vein fifty-five feet deep, on the former, and two ten-foot-face open cuts on the latter.

**Harper Gold and Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock $400,000; president, Lewis Jones; vice-president, Geo. S. Terry; treasurer, Egbert Guernsey; secretary, Rollin M. Morgan; office 69 Wall street, New York; owns the Imperial Bower lode, 1500x300 feet; situated in the Park district, about three miles from Eureka; vein a fissure about seven feet wide, running north-east and south-west, and passing apparently through an extinct crater or chimney; pay streak five feet, containing galena and gray copper with some brittle silver in a lime-spar gangue, adjoining which is twenty inches of gangue-matter; developments—one tunnel 100 feet long; the property promises fairly.

**Hellespont.**—300x1500 feet; situated on the south side of Henson Creek, two miles south-west of Capitol City, Galena district; located in January, 1883; owners W. L. Roberts, H. M. Corey, and John Setzer, all Lake City, and Wm. Rogers, Sears, Mich.; vein a fissure eleven feet wide, pay streak thirty-two inches, containing quartz carrying iron and copper pyrites, on which four small mill-runs of eight pounds showed twenty-one ounces silver and three-fourths ounce gold per ton; developed by a fifty-foot shaft.

**Henson Creek Reduction Company (The).**—Manager, W. S. Elmendorf; owns a reduction-works situated on Henson Creek, near Capitol City, containing complete outfit of machinery for the treatment of ores, with the necessary motive power.

**Hoffman.**—300x1500 feet; situated on the east slope of Engineer Mountain, three and one-fourth miles west of Rose's Cabin, Galena district; located in 1877, and patented in 1881; owners D. S. Hoffman and Jno. S. Hough, both Lake City; containing two fissure veins one and one-half and three and one-half feet wide, pay streak in latter vein five inches, containing quartz with sulphurets of silver, assaying from 150 to 200 ounces silver per ton; developed by a fifty-five-foot shaft and a forty-foot drift.

**Hotchkiss.**—(See Golden Fleece.)



**Hunkidori.**—300x1500 feet; situated on the north slope of Excelsior Mountain, two miles south-west of Lake City, Lake district; located in 1879; owners Thomas Burr, Lake City, and others; vein a fissure, with an eighteen-inch pay streak, containing sulphurets and galena in a quartz gangue, on which one assay showed ninety-nine ounces silver per ton; developed by two twenty-five-foot shafts.

**Imperial Bower.**—(See Harper Gold and Silver Mining Company.)

**Incus Mining and Milling Company (The).**—Incorporated under the laws of Illinois, in March, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, M. D. Hathway, Rochelle, Ill.; vice-president, A. N. Waterman; secretary and treasurer, A. F. Cool—both Chicago; general office Rochelle, Ill., and branch office Lake City, Colo.; owns the Incus, 300x1500 feet; situated on the south slope of Sheep Mountain, eleven miles west of Lake City, Galena district; located in 1875; vein a fissure six feet wide, pay streak twenty inches, containing galena with iron and copper pyrites, assaying twenty per cent lead and ten ounces silver per ton; developed by two open cuts with ten-foot faces each, and a tunnel 110 feet long, designed to cut the vein 110 feet deep, and having twenty feet more to run; and the Nevada and Eldorado, two fairly promising prospects, 300x1500 feet each, adjoining the Incus, on which the Company has done assessment work.

**Independence.**—300x1500 feet; situated on the south slope of Sheep Mountain, eleven miles west of Lake City, Galena district; located in 1876, and patented in 1882; owner C. H. Bent, Lake City; vein a fissure from three to five feet wide, pay streak thirty inches, containing galena, lead sulphates, copper pyrites, and copper glance, milling, when sorted from the gangue-rock, about thirty-two per cent lead and ten ounces silver per ton; developed by a drift 232 feet long; output for 1882 sixty-five tons of sorted ore, which netted the owner $1,010, after mining, shipping, and treating.

**Index.**—300x1500 feet; situated on the south slope of Two Belle Mountain, three miles from Lake City, Lake district; located in 1875; owners J. C. Bell, W. G. Luckett, Louis Kafka, Hugh J. Alexander, and John H. Maugham, all Lake City, and Gen. Chas. Adams, Denver; vein a fissure three feet wide, pay streak from one to eight inches, and probably averaging four inches in width, containing galena in a quartz gangue, which mills, when sorted, thirty per cent lead and fifteen ounces silver per ton; developed by a tunnel thirty feet long and a shaft 100 feet deep.

**Ivanhoe.**—300x1500 feet; situated on the south slope of Sunshine Mountain, one-half mile west of Capitol City, Galena district; located in April, 1881; owners John S. Campbell, Capitol City, and Dr. S. C. Dunkle, Lake City; vein a fissure, twelve feet wide, of mineralized quartz, carrying galena, yellow and native copper, and some iron pyrites; developed by a fifty-foot tunnel.

**Jessie.**—(Formerly Tom Benton); 300x1500 feet; situated on the south side of Henson Creek, one mile west of Lake City; owner Geo. A. Kellogg, Lake City; vein a fissure four feet wide, with two pay streaks, the first three inches wide, containing galena, assaying seventy-five ounces silver per ton, in a quartz gangue; and the second seven inches wide, containing galena and some gray copper, on which one mill-run of 1,000 pounds showed 100 ounces silver per ton, after close sorting; developed by a seventy-five-foot tunnel and two cuts with ten-foot faces each.

**Joaquin.**—300x1500 feet; situated in Schaffer's Basin, two miles west of Capitol City, Galena district, and patented in 1881; owner John S. Hough,

Lake City; vein a fissure five feet wide, pay streak thirty-five inches, composed of almost solid galena, milling sixty per cent lead and fifteen ounces silver per ton; developed by a tunnel sixty feet long.

**John Sherman.**—300x1500 feet; situated on the east slope of Bluff Mountain, one-half mile north-west of Lake City, Lake district; located in July, 1879; owners C. Brooks Williams, Scott Graham, and Lyons & Stegman, all Lake City; vein a fissure five feet wide, pay streak from ten to eighteen inches, containing black sulphurets, gray copper, and some brittle silver in a quartz gangue, on which a mill-run of two sacks obtained at a depth of eighteen feet showed sixty-four ounces silver per ton, after sorting; developed by a shaft forty feet deep and an open cut with a twenty-foot face.

**Kittie Cordes Tunnel.**—(See New York and Lake City Mining Company.)

**Lake Shore.**—300x1500 feet; situated at the foot of Lake San Christobel, three and one-half miles south of Lake City, Lake district; located in January, 1880; owners A. M. Wilson, J. E. Riley, and A. M. Forrest, all Lake City; vein a fissure five feet wide, pay streak eighteen inches, containing gray copper, iron pyrites, and zinc, in a quartz gangue, milling, when sorted, sixty-four ounces silver per ton; developed by two tunnels 100 and 150 feet long, respectively.

**Lellie.**—(Formerly Red Rover); 300x1500 feet; situated in Red Rover Gulch, seven and one-half miles west of Lake City, Galena district; located in January, 1882; owners J. W. Mills, Dr. J. Craig Miller, Samuel Watson, E. D. Bouton, and R. E. Peniston, all Lake City; vein a fissure four feet wide, pay streak from eight to twenty inches, and probably averaging twelve inches in width, containing galena, gray copper, and iron pyrites, in a quartz gangue, on which a mill-run of 300 pounds (sorted ore) showed thirty-four per cent lead and 185 ounces silver per ton; developed by seventy-five feet of work at various points along the vein.

**Lightning-Striker.**—300x1500 feet; situated on the north side of Henson Creek, adjoining the Compromise lode, Galena district; located in 1877; owners Jos. K. Mullin and Moritz Rich, both Lake City, and Klee Bros. and Sneathen & Wilson, all Pittsburgh, Pa.; vein a fissure five feet wide, pay streak eighteen inches, containing galena in a quartz gangue, milling, when sorted, thirty-five per cent lead and twenty-five ounces silver per ton; developed by a tunnel seventy feet long and a shaft twenty feet deep.

**Link.**—(Crossing the Jessie); 300x1500 feet; owners Geo. A. Kellogg and Thos. C. Burcher, both Lake City; vein a fissure four feet wide, containing mineralized quartz, pay streak four inches, composed of galena, assaying seventy ounces silver per ton, in a quartz gangue; developed by two shafts twelve and twenty-two feet deep.

**Little Barefoot.**—(Extension of Incus); 300x1500 feet; situated on the south slope of Sheep Mountain, eleven miles west of Lake City, Galena district, and patented in 1880; owners J. W. Abbott, Lake City, I. W. Woodward, South Pueblo, and Jos. Baum, Meridien, Miss.; vein a fissure from three to five feet wide, pay streak from ten to twenty inches, containing galena, iron and copper pyrites, with some brittle silver, in a quartz gangue, assaying an average of twenty-five ounces silver per ton; developed by one shaft twelve feet deep and one tunnel fifty feet long, designed to cut the vein fifty feet deep.

**Little Colorado.**—300x1500 feet; situated on the south slope of Excelsior Mountain, two miles south-west of Lake City, Lake district; located



in 1879; owners Thos. Burr, Lake City, and others; vein a fissure, containing a twenty-four-inch pay streak of sulphurets and galena, two assays showing 101 and 118 ounces silver per ton, in a quartz gangue; developed by two shafts twenty-five feet deep each.

**Little Hattie.**—300x1500 feet; situated on the north side of Henson Creek and on the south slope of Ocean Wave Mountain, seven miles west of Lake City, Galena district; located in 1875; owners J. C. Bell and J. W. Brockett, both Lake City, Gen. Chas. Adams, Denver, and Mayer & Gotthelf, Saguache; vein a fissure two feet wide, pay streak from two to five inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty-five per cent lead and 100 ounces silver per ton; developed by one forty-foot tunnel.

**Little Casino.**—(See Victor Group.)

**Little Monarch.**—300x1500 feet; situated on the divide between the East and Middle Cimarron, sixteen miles north-west of Lake City, Cimarron district; located in 1882; owners H. M. Corey, Chas. R. Brooks, and Geo. H. Cone, all Lake City, Gardiner Brooks and Estella Rogers, both Sears, Mich.; vein a fissure ten feet wide, pay streak twenty-four inches, containing black quartz, on which a mill-run of eighteen sacks showed $18 in gold and silver per ton; developments—one shaft thirteen feet deep.

**Little Turk.**—300x1500 feet; situated at the head of Boulder Gulch, four miles west of Capitol City, Galena district; located in October, 1878; owners Dr. J. Craig Miller and E. D. Bouton, both Lake City, Wm P. Harbottle, Grand Junction, E. R. Willard and J. C. Frisbie, both Wilmington, Ill.; vein a fissure two feet wide, pay streak four inches, containing gray copper, assaying sixty ounces silver per ton, in a quartz gangue; developed by a twenty-foot shaft and a tunnel sixty feet long, designed to cut the vein seventy-five feet deep.

**London and Savannah.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north slope of Excelsior Mountain, one and one-half miles south-west of Lake City, Lake district; located in 1877; owned by Thos. Burr, Lake City, and others; vein a fissure three and one-half feet wide, pay streak twenty-four inches, containing galena and sulphurets, assaying from forty to fifty ounces silver per ton, in a quartz gangue; developments—two shafts twenty-five feet deep each on the former and two shafts forty-two and fifteen feet deep on the latter.

**Lookout.**—(See New York and Lake City Mining Company.)

**McMahon.**—(Extension of Michigan); 300x1500 feet; situated on the west side of Alpine Gulch, four miles south-west of Lake City, Lake district; located in 1880; owner W. G. Luckett, Lake City; vein a fissure five feet wide, containing quartz with yellow and gray copper and iron pyrites, on which three assays showed from eight to thirty-two ounces silver per ton; developments—one thirty-foot shaft and one tunnel forty feet long, designed to cut the vein sixty feet deep.

**Magnolia.**—300x1500 feet; situated on the south slope of Sheep Mountain, four miles west of Capitol City, Galena district; located in 1881; owners S. Goode and J. F. McDonald, both Lake City; vein a fissure five feet wide, containing quartz and galena, assaying thirty-five per cent lead and from twenty to thirty ounces silver per ton; developments—one shaft twelve feet deep and one open cut with an eighteen-foot face.

**Mart. Sargent.**—(Extension of St. Louis); owner J. H. Simmons, Lake City; vein a fissure four feet wide, pay streak eighteen inches, containing galena similar to the St. Louis ore; developed by a twenty-five-foot open cut with a twenty-foot face.

**Mattie Georgia Group.**—Four claims, 300x1500 feet each; situated at the head of Cottonwood River, three miles west of Sherman, Park district; located in July, 1875, and in process of patent; group comprises the Mattie Georgia, Sterling, and Dolphin, three adjoining claims on the same vein, a fissure eight feet wide, containing four and one-half feet of quartz carrying copper pyrites and galena, milling, when sorted, fifteen to twenty per cent lead and forty ounces silver per ton; and in the Mattie Georgia there is three feet of almost solid galena, milling sixty per cent lead and twenty ounces silver per ton; developments—one forty-foot level on the first, two shafts thirty-five and twenty-two feet deep on Dolphin, and one thirty-foot-face cut on the Sterling, and the X. Y. Z. crossing the other claims; vein a fissure fifty feet wide, composed of quartz carrying iron pyrites and some gray copper; developed by two open cuts with twelve-foot faces each, and one tunnel 105 feet long, designed to cut the vein 100 feet deep; owners F. W. Sitterly, Silverton, and L. W. Balch, Animas Forks.

**May Queen.**—300x1500 feet; situated in Shaffer's Basin, two miles east of Rose's Cabin, Galena district; located in 1880; owners W. G. Luckett, C. F. McKenney, and C. H. Bent, all Lake City, and A. S. Hall, Chicago; vein a fissure, from three to four feet wide, and pay streak nine inches, containing almost solid galena, milling forty-five per cent lead and ten ounces silver per ton; developed by an open cut and tunnel thirty feet long, ten feet of which is under cover, and a shaft fifteen feet deep.

**Michigan.**—300x1500 feet; situated on the west side of Alpine Gulch, four miles south-west of Lake City, Lake district; located in 1875; owned by M. B. Gerry and Adair Wilson, both Lake City; vein a fissure five feet wide, containing two pay streaks, one on each wall twenty inches wide each, composed of gray and yellow copper and iron pyrites, milling ten per cent copper and fifty-five ounces silver per ton; developed by a fifty-foot tunnel and a ten-foot shaft at breast of tunnel.

**Minstrel Boy.**—300x1500 feet; situated on the west side of the Lake Fork of the Gunnison River, two and one-half miles south of Lake City, Lake district; located in 1878; owners J. F. McDonald and John H. Maugham, both Lake City, and M. Ellen McKane, Cornwall, Colo.; vein a fissure four feet wide, and a pay streak from ten to forty-eight inches, and probably averaging twenty-two inches in width, containing sulphurets and gold-bearing quartz and some gangue, assaying about $100 per ton; developed by an eighty-foot tunnel and a forty-five-foot shaft from the end of the tunnel.

**Monitor.**—(North-east extension of Champion); 300x1500 feet; situated on the east slope of Del Norte Mountain and in Burrows' Park, six miles west of Sherman, Park district; located in 1876; owners J. A. Williams, Animas Forks, Wm. Richards, White Cross, and Louis Kafka, Lake City; vein a fissure twelve feet wide, and a pay streak eight inches, containing iron and copper pyrites in a quartz gangue, assaying an average of twenty-five ounces silver per ton; developments—one ten-foot-face open cut and one cross-cut, known as the O. K. Tunnel, 275 feet long, designed to cut the vein 200 feet deep, and having 150 feet more to run.

**Monitor.**—(South-west extension of Ute); 300x1500 feet; situated on the north side of Henson Creek, four miles north-west of Lake City, Lake district; located in June, 1875, and in process of patent; owners A. R. Bushnell, Jno. G. Clark, Joseph Nathan, Jno. Schrein, and A. A. Bock, all Lancaster, Wis., Fred J. Miller, Prairie du Chien, Wis., and Adolph Nathan, Chicago; agent and attorney, J. W. Mills, Lake City; vein a fissure, from three to four feet wide, and pay streaks six inches, containing galena, assaying from forty to fifty ounces silver per ton, in a quartz gangue; developed by a sixty-foot shaft and several open cuts, the vein being uncovered continuously for some hundreds of feet.



**Monte Queen.**—300x1500 feet; situated on the west side of the Lake Fork of the Gunnison River, one and one-half miles south of Lake City, Lake district; located in 1876; owners C. Brooks Williams and J. C. Dubois, both Lake City; vein a fissure, twenty feet wide at the outcrop, pay streak four feet, containing sulphates of iron and lead, with some zinc and gray copper, in a quartz gangue, on which a small mill-run of sorted ore (100 pounds) showed $50 in silver and $15 in gold per ton; developments—one shaft forty feet deep and one tunnel seventy-five feet long, cutting the vein fifty feet deep, on which there is thirty feet of drifting.

**Monument Group.**—Four claims, 300x1500 feet each; situated in Monument Gulch, three miles north of Lake City, Lake district; located in 1881-82; owners S. Goode, Red Mountain Town, G. W. Henry, Jos. A. and Wm. P. Hunt, J. C. Bothwell, and A. M. Thurston, all Lake City; veins all fissures, in the Monument three and one-half feet wide, pay streak three inches, containing decomposed quartz, assaying twenty-five ounces silver per ton; developed by one tunnel 100 feet long; in the Intz four feet wide, pay streak ten inches, containing galena, assaying ten per cent lead and ten ounces silver per ton, in a quartz gangue; developments—two ten-foot-face cuts; in the Golden Fork six feet wide, containing quartz carrying iron and some copper pyrites, assaying eight ounces silver and $2 gold per ton; developed by a forty-three-foot shaft; in the Vandalia six feet wide, containing quartz carrying iron pyrites and some galena; developments—one sixteen-foot-face cut and one five-foot shaft.

**Moro.**—300x1500 feet; situated on the north slope of Capitol Mountain, one mile south-west of Capitol City, Galena district; located in June, 1876; owners J. B. Search and James Haley, Capitol City, and Thos. M. Field, Denver; vein a fissure four feet wide, pay streak twelve inches, containing galena and some gray copper, milling sixty per cent lead and fifty ounces silver per ton, when sorted from the gangue-rock; developed by two drifts 200 and 130 feet long and a twenty-foot shaft.

**Moro No. 2.**—300x1500 feet; situated on the west slope of Sunshine Mountain, one and one-fourth miles south-west of Capitol City, Galena district; located in June, 1876; owners Jno. Henderson, Geo. Pivue, and Wm. Davy, all Capitol City; vein a fissure four feet wide, pay streak twelve inches, containing galena, with some iron pyrites and gray copper, assaying sixty per cent lead, forty ounces silver, and from one-half to one ounce gold per ton, in a quartz gangue; developed by an eighty-foot drift.

**Mountain View Mining Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president, Geo. F. Royce; secretary and treasurer, S. H. Cowles—both Buffalo, N. Y.; office Buffalo; owns three claims, 300x1500 feet each, viz.: Mountain View, about one-half mile north of Sherman, Park district; located in 1876; vein a fissure four feet wide, containing quartz carrying galena and yellow copper, assaying from 25 to 100 ounces silver per ton; developed by a double-compartment shaft 177 feet deep; improvements—two horse-whims and a shaft-house; the Columbia and Canon, the latter adjoining Mountain View, and the former four miles east of Sherman, on both of which the Company is doing development work.

**Napoleon.**—300x1500 feet; situated on the west side of the Lake Fork of the Gunnison River, and on the east slope of Del Norte Mountain, six miles west of Sherman, Park district, and patented in 1882; owners Jno. J. Crooke, Lake City, Louis Lowe, White Cross, and Alva Adams, Alamosa; vein a fissure five feet wide, pay streak from eighteen to twenty-four inches, containing gray copper, galena, and iron sulphurets, milling 150 ounces silver per ton, when sorted from the gangue-rock; developed by a level seventy-five feet long and a shaft seventy-five feet deep.

**Nellie S.**—300x1500 feet; situated in Cooper Creek Gulch, three miles north of White Cross, Park district; located in 1880; owners Samuel Wendel, Lake City, E. C. Wager, White Cross, and C. B. Hickman, Denver; vein a fissure ten feet wide, containing quartz carrying galena and gray copper, with iron and copper pyrites, assaying from 30 to 100 ounces silver per ton; developed by two ten-foot shafts.

**Nellie M. and Fannie M.**—Two claims, 300x1500 feet each; situated on the west side of the Lake Fork of the Gunnison River, one-half mile south of Lake City, Lake district; located in 1877 and 1878, respectively; owner F. M. Mendenhall, Lake City (D. J. Huntsman, Lake City, is an owner in the former); vein a well defined fissure fifteen feet wide, pay streak thirty inches, containing quartz carrying pockets or egg-shaped bunches of brittle silver and tellurium ore, assaying from 20 to 350 ounces, and probably averaging fifty ounces silver per ton; developments—one thirty-foot shaft and one 160-foot tunnel on the former, and one twenty-foot face cut, with a four-foot shaft from the end of cut, and a cross-cut fifteen feet long, on the latter.

**Neosho.**—300x1500 feet; situated on the north side of Henson Creek, two miles west of Rose's Cabin, Galena district; located in 1882; owners J. F. McDonald, T. P. Bell, and —— Palmer, all Lake City; vein a fissure twenty feet wide, containing quartz, in which appear, at irregular intervals, seams of copper and copper chlorides from one-half to two inches thick, assaying eighty ounces silver per ton; developed by one twelve-foot-face cut.

**Nettie.**—300x1500 feet; situated in Boulder Gulch, two and one-half miles north of Capitol City, Galena district; located in 1880; owners Louis Weinberg, P. G. Dawson, Patrick Smith, and L. Lynch, all Lake City; vein a fissure five feet wide, pay streak twelve inches, containing galena, assaying from forty to fifty per cent lead and thirty-five ounces silver per ton, in a quartz gangue; developed by one fifteen-foot-face cut and one fifteen-foot shaft from the bottom of cut.

**Newton Placer.**—Situated on Cimarron Creek, about sixteen miles from Lake City, Cimarron district; covering a strip ten miles in length along the bank of the stream, and said to contain a rich gravel.

**New York and Lake City Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Jacob Lewis; secretary and treasurer, Henry J. Ruggles—both New York City; superintendent, Andrew McLauchlin, Lake City; offices New York City and Lake City; owns the Lookout and Golden Eagle, two adjoining claims on the same vein, 300x1500 feet each; situated on the south side of Dead Man's Gulch, three miles east of south from Lake City, Lake district; located in 1879 and 1880, respectively; vein a fissure thirty feet wide, twelve feet of which is mineralized, containing gold-bearing quartz, assaying an average of $100 per ton in gold and silver; developments—one twenty-five-foot shaft and one sixty-foot tunnel on the former, and one 190-foot tunnel on the latter; and the Kittie Cordes Tunnel site, 3000x6 feet; located in 1880; on which a tunnel is now



driven seventy-five feet, designed to cut the vein described 100 feet deep, and to run entirely through Two Belle Mountain, cutting the Belle of the West, Belle of the East, and other veins.

**Non-such Group.**—J. P. Wiswall and H. T. Sanden, both Denver, owners; group comprises the Non-such, White Chief, Freeze-out, Boulder, and Magnificent lodes, 1500x300 feet each; situated on Cottonwood Creek, Sherman district, near Sherman; located in July, 1880; veins all fissures from two to six feet wide, containing quartz, copper pyrites, and iron, assaying from one to three ounces gold and from sixteen to twenty-five ounces silver per ton; developed by 150 feet of open cuts and tunnels.

**O. K. Tunnel.**—(See Monitor.)

**Ocean Wave Smelting and Mining Company (The).**—Incorporated under the laws of Colorado, in 1876; capital stock $400,000, in 4,000 shares of $100 each, non-assessable; president, Wm. R. Bernard, Kansas City, Mo.; vice-president, James W. Potter, Webb City, Mo.; secretary and treasurer, L. H. Spilker, Red Cliff, Colo.; owns the Ocean Wave and Wave of the Ocean, two adjoining claims on the same vein, covering eight and nine acres, respectively; situated on the north side of Henson Creek, seven and one-half miles west of Lake City, Galena district, and patented in 1882; vein a fissure three and one-half feet wide, pay streak from one to thirty inches, and probably averaging seven inches in width, containing gray and yellow copper and galena in a quartz gangue, 610 tons of which ore, treated at the Company's own works, milled, when sorted, 110 ounces silver per ton, but portions of the vein are barren; developments—four levels with connecting shafts and winzes, aggregating 1,500 feet, with considerable stoping, on the former, and a thirty-five-foot drift on the latter; output 1,000 tons, yielding 110,000 ounces silver; this Company owns a smelter and six acres of ground, on which it is erected, in Lake City; operated by water-power; capacity twelve tons in twenty-four hours.

**Ophir.**—300x1500 feet; situated in Red Cloud Gulch, one-fourth of a mile west of Rose's Cabin, Galena district; located in 1879; owner C. A. Watson, Lake City; vein a fissure four feet wide, and pay streak twenty inches, containing galena and copper pyrites in a quartz gangue, milling, when sorted, forty per cent lead and twenty-five ounces silver per ton; developed by a forty-five-foot tunnel.

**Ottumwa.**—(See Victor Group.)

**Palmetto Extension Silver Mining Company (The).**—Incorporated under the laws of New Jersey, in September, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, Judah Isaacs; secretary, David Loewen; treasurer, David Mitchell—all Philadelphia; officer 14 South Third street, Philadelphia; owns the Lilian lode, 1500x300 feet; situated on Engineer Mountain, about two miles from Rose's Cabin, galena district; vein a fissure, varying in width, and containing galena, assaying from 60 to 110 ounces silver per ton in a siliceous gangue; developed by a shaft fifty feet in depth.

**Palmetto Mining and Milling Company (The).**—Superintendent, Robert Burnham, owns the Palmetto, Ruby Queen, and Miners' Bank, three adjoining claims on the same vein, covering 3123x300 feet of surface ground, and situated on Engineer Mountain, about one and one-half miles from Rose's Cabin, Galena district; vein a fissure in fine-grained porphyry, from two to five feet wide, pay streak from ten to twenty inches, containing sulphides of iron, zinc, and copper, mixed with ruby and native

silver, in a silicious gangue-matter, milling, when sorted, from 50 to 100 ounces silver per ton, and assays of selected samples have given 800 ounces silver per ton; developments consisting of one shaft 350 feet deep and some smaller shafts, with several drifts aggregating about 1,650 feet, and some winzes; output about fifteen tons per day, and treated at the Company's mill, built by Fraser & Chalmers, Chicago; situated near the mine, and containing fifteen Stamps, supplemented with one of Howell's Roasting and Chloridizing Furnaces, with combination amalgamating-pans and settlers, and supplied with the necessary motive power; capacity twenty-five tons per day.

**Park Gold and Silver Mining Company (The).**—Incorporated under the laws of New York in June, 1880; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president, J. F. DeWitt; secretary and treasurer, G. J. Bowden—both Buffalo; superintendent, C. H. Bent, Lake City; offices Buffalo, N. Y., and Lake City, Colo.; owns five claims, 300x1500 feet each, viz.: Coney, Jessie, and Cumberland, located in 1876, and Big Galena in 1879; situated on Cooper Creek, one and one-half miles north of White Cross, Park district; veins all fissures, two, six, eight, and four feet wide, respectively, containing mineralized quartz, assaying from 30 to 100 ounces silver per ton, except the Big Galena, which averages twenty-four ounces; developments—assessment work on each claim, and on the Cumberland a tunnel 200 feet long, designed to cut the vein 175 feet deep; and the Red Gulch, situated in Red Gulch, one mile west of White Cross, Park district; patented in 1882; vein a fissure from two to five feet wide, containing mineralized quartz, adjoining which is a body of porphyry carrying deposits of galena, assaying from 20 to 100 ounces silver per ton; developed by a 100-foot incline, a sixty-foot cross-cut, and seventeen feet of drifting; all connected.

**Pauline, Mowhawk, and Smuggler.**—Three claims, 300x1500 feet each; situated on the west side of the Lake Fork of the Gunnison River, two and one-half miles south of Lake City, Lake district; located in 1876, 1878, and 1879, respectively; owners J. F. McDonald, Lake City, and M. Ellen McKane, Cornwall; veins all fissures four feet in width each, pay streaks about eighteen inches containing galena, assaying forty ounces silver per ton, in a quartz gangue; developments—two tunnels 80 and 100 feet long and forty feet of drifting on the vein, where cut by the eighty-foot tunnel at a depth of forty feet.

**Pay-master.**—(On Moro vein); 300x1500 feet; situated on the south-west slope of Sunshine Mountain, one mile south-west of Capitol City, Galena district, and patented in 1880; owners Thomas Shanly, J. C. Bell, and Hugh J. Alexander, all Lake City; vein a fissure four feet wide, pay streak twelve inches, containing galena and gray copper, assaying sixty per cent lead, forty ounces silver, and one ounce gold per ton, in a quartz gangue; developed by one thirty-five-foot tunnel and several open cuts on the vein.

**Pelican.**—300x1500 feet; situated on the north side of Henson Creek, two miles west of Lake City, Lake district, and patented in 1882; owners Jos. K. Mullin, John H. Maugham, and Moritz Rich, all Lake City; vein a fissure three feet wide, containing black quartz carrying brittle and ruby silver, milling, when sorted, from thirty-seven to sixty-two ounces, and probably averaging forty-five ounces silver, with some gold, per ton; developed by a fifty-foot shaft.

**Pilot.**—300x1500 feet; situated on the east slope of Two Belle Mountain, three miles south of Lake City, Lake district; located in January, 1883; owner Andrew Bennie, Lake City; vein a fissure five feet wide, containing telluride quartz, one assay showing eighty-seven ounces silver per ton; developed by two shafts twelve and twenty-five feet deep, one open cut fifteen feet long, and one cross-cut thirty feet long.



**Piute.**—(See Eighty-one.)

**Plutarch.**—300x1500 feet; situated on the west side of the Lake Fork of the Gunnison River, three and one-half miles south of Lake City, Lake district; located in 1876; owners James E. Riley and W. C. Moore, both Lake City, and the estate of J. J. Nutting; vein a fissure fifteen feet wide, containing two pay streaks, one on each wall, the first twelve inches wide, composed of galena in a quartz gangue, milling, when sorted, eighty per cent lead and eleven ounces silver per ton, and the second twenty-four inches wide, composed of gray copper in quartz, which mills, when sorted, ten per cent copper and 150 ounces silver; developed by a tunnel 150 feet long, cutting the vein eighty feet deep, at which point there is 100 feet of drifting, and a tunnel fifty feet long, cutting vein twenty feet deep, at which point there is 150 feet of drifting; output about 225 tons.

**Polar Bear.**—300x1500 feet; situated on the north-east slope of Engineer Mountain, three miles west of Rose's Cabin, Galena district; located in 1882; owners H. L. Franklin, Dr. S. C. Dunkle, and Arthur P. Cook, all Lake City; ore body is probably a deposit—one shaft eighty-five feet deep and a drift twenty-five feet long from the bottom of shaft, both showing mineralized talc similar to the casings in the Frank Hough mine.

**Polar Star.**—(See San Juan County.)

**Pride of America.**—300x1500 feet; situated on the north slope of Casino Mountain, two miles east of Capitol City, Galena district; located in 1875; owners H. F. Smith, Lake City, J. W. Taylor, Cañon City, E. M. Schayer, Denver, and A. C. Cryder, London, Ohio; vein a fissure, containing two pay streaks eighteen and nine inches wide, composed of galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead and thirty-five ounces silver per ton; developed by a shaft seventy-five feet deep and a cross-cut fifty feet long, with some other workings.

**Red Cloud.**—300x1500 feet; situated on the east side of the Lake Fork of Gunnison River, two miles south of Lake City, Lake district; patented in 1881; owners J. Maurer, B. W. Felder, Jno. Swanson, and Erasmus Henson, all Lake City; vein a fissure four feet wide, pay streak from twelve to eighteen inches, containing galena, iron and copper pyrites in a quartz gangue, milling, when sorted, fifteen ounces silver per ton; developed by a sixty-eight-foot shaft.

**Red Rover.**—(See Lellie.)

**Roscoe Conkling.**—300x1500 feet; situated at the head of Cimarron Creek, about sixteen miles from Lake City, Cimarron district; vein a fissure about twenty feet wide, with two pay streaks, one on each wall, fifty and twenty-four inches in width, the gangue being bluish clay near the surface and blue quartz lower down, carrying gold in fluor and filiform crystals and auriferous pyrites, assaying from $50 to $150 per ton; developed by one fifty-foot shaft and two drifts thirty and forty feet in length.

**Royal Charter.**—300x1500 feet; situated on the east slope of Del Norte Mountain, six miles east of Sherman, Park district; located in 1877; owners J. H. Simmons, Lake City, and others; vein a fissure five feet wide, pay streak twenty-four inches, containing galena and some gray copper, assaying from thirty to forty per cent lead and from fifteen to ninety-two ounces silver per ton, in a quartz gangue; developed by an open cut and tunnel twenty-five feet long, five feet of which is under cover, and a shaft from the breast twenty feet deep.

**Rustler.**—300x1500 feet; situated on the north-east slope of Engineer Mountain, one mile west of Rose's Cabin, Galena district; located in September, 1879; owners Louis Weinberg, Lake City, and Geo. E. Berry, Rose's Cabin; vein appears to be a fissure, four feet wide, pay streak ten inches, containing iron and copper pyrites, gray copper, and some ruby silver, assaying twenty-five per cent copper and fifty ounces silver per ton, in a quartz gangue; developed by a fifty-foot tunnel on the vein.

**St. Garthard Group.**—Three adjoining claims on the same vein, 300x1500 feet each; situated on the east side of Alpine Gulch, three and one-half miles south-west of Lake City, Lake district; located in 1880; owners M. B. Gerry, E. I. Stirman, and Geo. O'Bannon, all Lake City; vein a fissure four feet wide, pay streak from fifteen to eighteen inches, containing galena in a quartz gangue, milling, when sorted, fifty-five and one-half per cent lead and twenty-eight and one-half ounces silver per ton; developments—two shafts sixty-five and ten feet deep on the St. Garthard, and one twelve-foot shaft and one twelve-foot-face cut on Tallahassee, and a tunnel seventy-two feet long on the Florida.

**St. Louis.**—300x1500 feet; situated on the north side of Henson Creek, one-half mile east of Rose's Cabin, Galena district; patented in 1881; owner J. H. Simmons, Lake City; vein a fissure four feet wide, pay streak eighteen inches, composed of almost solid galena, milling, when sorted, forty-five per cent lead and ten ounces silver; developed by one tunnel 160 feet long connected with the surface by a fifty-two-foot winze, and from which at a distance of 110 feet from its mouth is a shaft 178 feet deep, with levels running therefrom as follows: at depth of 100 feet fifty feet long, and at depth of 165 feet seventy-five feet long, leaving the ore body standing; and it is estimated that 3,000 tons of ore are now in sight.

**St. Paul Sulphuret Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in the fall of 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, W. L. Wilson; vice-president, W. S. Goodhue; secretary and treasurer, Chas. Shardrow—all St. Paul, Minn.; manager, E. D. Bouton, Lake City; offices Lake City and St. Paul; owns the Cora and Sulphuret, two adjoining claims on the same vein, 300x1500 feet each; situated on the east side of the Lake Fork of the Gunnison River, one and one-half miles south of Lake City, Lake district; patented in 1881; vein a fissure, fifty feet wide, of quartz containing pockets of galena, gray copper, and zinc blende, appearing at irregular intervals, assaying from 5 to 1,000 ounces silver per ton; developed by three shafts, 45, 60, and 200 feet deep, with a drift fifty feet long from the bottom of the first, and two drifts from the bottom of the last 60 and 267 feet long, and one tunnel sixty feet long; and also owns the Sulphurets No. 3 lode, and Well-water placer, covering six acres, adjoining the above property; located for surface-ground and water purposes.

**Sarah Wood.**—300x1500 feet; situated on the American Flats (Engineer Mountain), three miles west of Rose's Cabin, Galena district, and patented in 1882; owners Jno. J. Crooke and Henry A. Wood, both Lake City; ore body probably a deposit, one forty-foot shaft showing the iron cap which it is thought covers the mineral, presenting similar indications to Frank Hough mine when similarly developed.

**Silver Chord Consolidated Mining Company.**—Incorporated under the laws of New York, in November, 1880; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Edgar W. Crowell; vice-president, Wm. O. McDowell; secretary and treasurer, S. Lincoln Hutchinson; general manager, Wm. R. Wemple—all New York City; offices



Room 7 No. 60 Liberty street, New York, and Lake City; owns three claims, 300x1500 feet each, viz.: Silver Chord and Silver Chord Extension, two adjoining claims on the same vein, a fissure four feet wide, with a pay streak in former from twelve to thirty inches wide, composed of quartz carrying gray and yellow copper and galena, milling, when sorted, sixty ounces silver per ton; developed by a 120-foot shaft; and in the latter from three to eighteen inches wide, composed of gray copper, iron and copper pyrites, galena, and sometimes wire silver, in a quartz gangue, the first-class ore milling, when sorted, 300 ounces silver per ton, the second-class 150 ounces, and both together averaging fifty ounces per ton without sorting; developed by 600 feet of shafting and drifting; and the Czarina lying parallel to the others; vein a fissure six feet wide, containing a mineralized quartz; developments—one shaft fifty feet deep; all situated on the south-west slope of Yellowstone Mountain, one-half mile north of Capitol City, Galena district; Silver Chord Extension patented in 1880, and others in process.

**Silver Horn.**—(See Victor Group.)

**Silver Queen and Forest Queen.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north-east slope of Engineer Mountain, one-fourth mile south-east of Rose's Cabin, Galena district; located in May, 1880; owners Olen O. and Stanley Larson and Arthur Lakes, all Del Norte; vein probably a contact, nine feet wide, pay streak from five to twenty-two inches, containing galena with gray and yellow copper in a quartz gangue, milling, when sorted, twenty-five ounces silver per ton; developments—a ten-foot shaft and a sixteen-foot tunnel on the former, and a twenty-five-foot cut and tunnel, ten feet of which is under cover, on the latter.

**Silver State.**—J. P. Wiswall and A. T. Sanden, both Denver, owners; claim 1500x300 feet; situated at Sherman, Sherman district; located in 1880; vein a fissure three and one-half feet wide, containing galena and yellow copper, assaying sixty ounces silver per ton, in a quartz gangue; developed by one tunnel on the vein twenty feet in length.

**Snow-flake.**—300x1500 feet; situated in Grizzly Gulch, three miles south of White Cross, Park district; located in 1880; owners Sam'l Wendel, Lake City, and Jno. Anderson and Andrew Lindbloom, both White Cross; vein a fissure thirteen feet wide, pay streak thirty inches, containing galena, assaying from three to forty-five ounces silver per ton, in a quartz gangue; developments—one ten-foot shaft and one twelve-foot tunnel.

**South Pole.**—300x1500 feet; situated on the south side of Henson Creek, four miles west of Capitol City, Galena district; located in 1882; owners Wm. Raaka, Lake City; vein a fissure five feet wide, pay streak twenty-four inches, containing galena, gray and yellow copper, and zinc, assaying forty ounces silver per ton, in a quartz gangue; developments—a twenty-foot shaft.

**Star of Hope and Grand View.**—Two claims, 300x1500 feet each; situated on the east slope of Engineer Mountain, three miles west of Rose's Cabin, Galena district; located in April, 1882; owners Dr. D. S. Hoffman, Hugh J. Alexander, Alfred Schiffer, Henry Kohler, Dr. J. Craig Miller, C. F. McKenney, and Daniel Hurd, all Lake City; ore body is probably a deposit, two shafts, twenty-two and forty feet deep on each claim, respectively, showing the same indications as the Frank Hough mine did with the same amount of developments.

**Starlight.**—(Extension of Ophir); 300x1500 feet; situated in Red Cloud Gulch; one-fourth mile west of Rose's Cabin, Galena district; located in 1879; owners C. F. Hilgenhaus, Jos. Hohisel, and Robert Echlyn, all Lake

City; vein a fissure four feet wide, pay streak twenty inches, containing galena and copper pyrites in a quartz gangue, milling, when sorted, forty per cent lead and twenty-two ounces silver per ton; developments—two shafts ten feet deep each and a cut with a ten-foot face.

**Sulphuret.**—(See St. Paul Sulphuret Consolidated Mining Company.)

**Superior.**—300x1500 feet; situated on the American Flats (Engineer Mountain), three miles west of Rose's Cabin, Galena district; patented in 1882; owners Jno. J. Crooke and Henry A. Wood, both Lake City; ore body is probably a deposit, a fifty-foot shaft showing the same indications as the Frank Hough did with similar developments.

**Sweet Home.**—300x1500 feet; situated at the head of Alpine Gulch, six and one-half miles south-west of Lake City, Galena district; patented in 1882; owners J. P. Richardson and Alonzo Wright, both Lake City, Riley Edwards, Saguache, and Thomas Owens, Pueblo; vein a fissure fifteen feet wide, pay streak four feet, containing quartz carrying gray copper, and which mills, when sorted, ten per cent copper and thirty-five ounces silver per ton; developments—one drift forty-five feet long, one shaft fifty feet deep, and several openings on the vein.

**Tallahassee.**—(See St. Garthard Group.)

**Tobe.**—300x1500 feet; situated in Yellowstone Gulch, one mile north of Capitol City, Galena district; located in 1879; owners Dr. J. Craig Miller, J. W. Mills, E. D. Bouton, all Lake City, and C. S. Green, Roaring Branch, Pa.; vein a fissure five feet wide, pay streak twenty inches, containing galena and zinc blende, assaying eight ounces silver per ton, in a quartz gangue; developed by a seventy-five-foot tunnel on the vein, the latter being split up into several streaks where the working is started in the gulch, but will probably improve with further development.

**Tom Benton.**—(See Jessie.)

**U Bet.**—(South-west extension of Champion); 300x1500 feet; situated on the east slope of Del Norte Mountain, six miles west of Sherman, Park district; located in 1879; owners E. A. Williams, Animas Forks, and H. E. Wright, White Cross; vein a fissure twelve feet wide, pay streak eight feet, containing iron and copper pyrites, assaying an average of thirteen per cent copper, twenty ounces silver and a trace of gold per ton, in a quartz gangue; developed by a twenty-foot shaft.

**Ule.**—(See Crooke's Mining and Smelting Company.)

**Uncle Sam.**—300x1500 feet; situated in Cooper Creek Gulch, four miles north of White Cross, Park district; located in 1879; owners Samuel Wendel, Lake City, and E. P. Weiss, Denver; vein a fissure five feet wide, pay streak eighteen inches, containing white quartz carrying some ruby silver, gray copper, galena, and iron pyrites, assaying from 5 to 900 ounces silver per ton; developments—one forty-six-foot shaft and one twelve-foot-face cut.

**Ute.**—(See Crooke's Mining and Smelting Company.)

**Vermilion.**—300x1500 feet; situated on the north-east slope of Engineer Mountain, two miles west of Rose's Cabin, Galena district; located in May, 1882; owners Louis Weinberg and Peter Shark, both Lake City; vein probably a fissure two and one-half feet wide, pay streak twelve inches, containing iron pyrites and sulphurets, assaying $65 per ton, in a quartz gangue; developed by a twelve-foot shaft.



**Vermont.**—(See Victor Group.)

**Victor Group.**—Seven claims, 300x1500 feet each; situated on Henson Creek, seven miles west of Lake City, Galena district, viz.: Victor and Ottumwa, two adjoining claims on the same vein, located in 1879 and 1876, respectively; owners of the former Thos. L. Beam and Joseph Roatcap, and of the latter J. W. Brockett and Thos. L. Beam—all Lake City; vein a fissure four feet wide, pay streak eighteen inches, containing galena and some iron and copper pyrites in a quartz gangue, milling, when sorted, an average of thirty per cent lead and ten ounces silver per ton; developments—one fifteen-foot tunnel, cutting the vein thirty feet deep, and twenty-five feet of drifting, on the Victor, and one twenty-foot-face cut, with a twenty-foot tunnel from the end of the cut, and one seventy-five-foot shaft, on the Ottumwa; Little Casino, located in July, 1882; owners D. S. Hoffman, N. Goodwin, and N. P. Meservie, all Lake City; vein a fissure five feet wide, containing galena and gray copper, assaying forty per cent lead and twenty ounces silver per ton, in a quartz gangue; developed by four open cuts, with ten-foot faces each; Silver Horn, located in 1880; owners Samuel Smith and Chas. Taff, both Lake City; vein a fissure five feet wide, containing galena and gray copper, assaying from 41 to 700 ounces, and averaging 150 ounces silver per ton, in a quartz gangue; developed by two tunnels forty and twenty-five feet long, respectively; Shouster, located May, 1881; owners Sam'l Smith and Chas. Taff, both Lake City; vein a fissure five feet wide, containing galena and gray copper, assaying thirty ounces silver per ton, in a quartz gangue; developed by an open cut with a ten-foot face and one ten-foot shaft from end of cut (the last three claims on the Big Casino vein); Vermont, located in March, 1883; owners Sam'l Smith and Thos. L. Beam; vein a fissure five feet wide, pay streak eighteen, inches containing quartz carrying galena, iron and copper pyrites, and some native silver, one mill-run of sorted ore returning 238 ounces silver per ton; developed by five tunnels aggregating 535 feet in length; and Alabama, located in March, 1883; owners Thos. L. Beam and Sam'l Smith, both Lake City; vein a fissure five feet wide, pay streak eighteen inches, composed of galena and iron and copper pyrites in a quartz gangue, one mill-run of sorted ore showing 238 ounces silver and some gold per ton; developed by one sixty-five-foot shaft.

**Wall Street.**—300x1500 feet; situated in Vermilion Gulch, three miles south-west of Capitol City, Galena district; located in May, 1878; owners Peter McMahon, Capitol City, and John McMahon, Lake City; vein a fissure four feet wide, pay streak twelve inches containing galena, assaying fifty per cent lead and from twenty to forty ounces silver per ton, in a quartz gangue; developments—one drift on the vein thirty feet long.

**War Chief.**—(Extension of South Pole); 300x1500 feet; situated on the south side of Henson Creek, four miles west of Capitol City, Galena district; located in 1882; owned by Dr. S. C. Dunkle, Chas. French, and Zeno Felder, all Lake City; vein a fissure six feet wide, containing mineralized quartz, carrying galena and gray copper; developments—ten-foof face open cut.

**Washington.**—300x1500 feet; situated on the north side of Henson Creek, eleven miles west of Lake City, Galena district; located in February, 1882; owners J. W. Brockett, R. Landreth, and Lyle Bros., all Lake City; vein a fissure six feet wide, pay streak twenty-four inches, containing galena and copper pyrites, with some zinc, assaying probably an average of 150 ounces silver per ton, in a quartz gangue; developed by one shaft thirty feet deep.

**Wave of the Ocean.**—(See Ocean Wave Mining and Smelting Company.)

**Western Slope and Cimarron.**—Two adjoining claims on the same vein, 300x1500 feet each; situated at the head of Cimarron Creek, three and one-half miles north of Uncompahgre Peak, Cimarron district; located in August, 1881; owners J. C. Love, Rico, Chas. Hayner, E. Perry, and Henry Moody, all Portland, Colo.; vein a fissure three feet wide, containing galena and gold-bearing quartz, assaying $75 per ton; developed by two shafts twenty-two feet deep each, one on each; the last claim is owned by J. C. Love alone.

**Wolverine.**—300x1500 feet; adjoining Sherman on the west, Park district; located in 1876; owners C. H. Bent, Lake City, and H. J. Hall, Chicago; vein a horizontal contact, from one to three feet thick, containing quartz carrying yellow copper and galena, assaying from 37 to 160 ounces silver per ton; developed by two drifts 30 and 100 feet long.

**Wood.**—(See Sarah Wood.)

**Woods.**—(See H. M. Woods.)

**Wyoming.**—300x1500 feet; situated on the top of Engineer Mountain, two and one-half miles west of Rose's Cabin, Galena district; located in 1876; owners Geo. E. Berry, Rose's Cabin, and Samuel P. Pool, Pennsylvania; vein probably a fissure, five feet wide, pay streak eighteen inches, composed of almost solid galena and iron pyrites, milling, when sorted, 200 ounces silver per ton; developments—one ninety-foot shaft; output thirty-five tons.

**Yellow Jacket.**—300x1500 feet; situated on Henson Creek, five miles west of Lake City, Galena district, and patented in 1882; owners J. C. Bell, Jno. H. Maugham, Hugh J. Alexander, Jno. S. Hough, and Zene Snowder, all Lake City; vein a fissure four and one-half feet wide, pay streak from one to thirty-six inches, and probably averaging six inches in width, containing crystallized brittle silver, galena, and copper pyrites, in a quartz gangue, a mill-run of 3,800 pounds (sorted ore) showing 151 ounces silver and one-half ounce gold per ton; developed by two tunnels 130 and 30 feet long.

**Yellow Medicine.**—300x1500 feet; situated on the east slope of Yellowstone Mountain, one and one-half miles north-east of Capitol City, Galena district; located in 1876; owners Peter McMahon and Jno. Strom, both Capitol City; vein a fissure four feet wide, pay streak from twelve to fifteen inches, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and twenty ounces silver per ton; developed by a thirty-foot drift and a 130-foot tunnel, both on the vein.

**Young America.**—300x1500 feet; situated on the south-west slope of Yellowstone Mountain, one-half mile north of Capitol City, Galena district; located in April, 1877; owners Alfred A. Hard and W. S. Chamberlain, both Cleveland, Ohio, X. R. Calloway, Capitol City, and Chas. Shaffer, Rose's Cabin; vein a fissure five feet wide, pay streak ten inches, containing the decomposed products from galena, with some gangue, milling, when sorted, seventy-five ounces silver per ton; developed by three shafts, 165, 66, and 22 feet deep; output $5,000.

**Lee Mining and Smelting Company (The).**—Incorporated under the laws of Illinois, August 9, 1878; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; owns a smelting-works, situated at Capitol City, containing complete machinery for the treatment of ores, with the necessary motive power.

# Huerfano County.

This County was settled at an early day, and is bounded on the north by Custer and Pueblo, on the east by Las Animas, on the south by Costilla and Las Animas, and on the west by Saguache and Costilla counties.

It has an estimated population of 4,500, with Walsenberg as its county seat, and covers an area of 1,584 square miles, only a small portion of which is devoted to the pursuit of mining. The latter industry is confined to the range of mountains on the western border, and chiefly to the vicinity of Spanish Peaks, where prospecting has been carried on for some years. The veins are said to be fissures carrying gold and silver, and in many instances both of these metals.

**Big Blue and Esperanza.**—O. D. Staplin and Frank Lawrence, both La Veta, owners; claims 1500x300 feet each; situated on the north slope of West Spanish Peak, Spanish Peak district, twelve miles from La Veta; located in 1879 and 1880; veins both fissures, with crevices about four feet wide, and pay streaks from two to eighteen inches, containing galena, assaying from $40 to $50 per ton; developed by a tunnel fifty-five feet in length.

**Copper King.**—L. Winans and F. Lawrence, both La Veta, owners; claim 1500x300 feet; situated on the north slope of West Spanish Peak, Spanish Peak district, ten miles from La Veta; located in 1883; vein a fissure, with a crevice three feet wide, and a pay streak twelve inches, containing galena and copper, assaying $60 per ton, in a quartz gangue; developed by two tunnels 40 and 100 feet in length, respectively.

**Esperanza, John Sherman, and Garfield.**—J. P. Shanger, La Veta, and H. P. C. Lassen, Chicago, Ill., owners; claims 1500x300 feet each; situated on the north slope of West Spanish Peak, Spanish Peak district, eleven miles from La Veta; located in 1880; veins all fissures, with crevices from five to ten feet wide, and pay streaks from two to four inches, containing galena, assaying from $66 to $120 per ton, in a quartz gangue; developed by a number of adits thirty feet in length.

**Highland Chief.**—J. M. Pavey, E. W. Burtch, Henry Durgre, and Frank Lawrence, all La Veta, owners; claim 1500x300 feet; situated on the north slope of West Spanish Peak, Spanish Peak district, eleven miles from La Veta; located in 1879; vein a fissure, with a crevice three feet wide, and a pay streak eight inches, containing galena and sulphurets, assaying from 100 to 800 ounces silver per ton; developed by an adit forty feet in length.

**Mountain Monarch Silver Mining Company (The).**—Incorporated under the laws of Iowa; capital stock $2,000,000, in 100,000 shares of $20 each, non-assessable; president, James Harlan; vice-president,

W. H. Mason; secretary, J. B. Coat; treasurer, A. S. Hunter; offices Mt. Pleasant, Iowa, and La Veta, Colo.; owns the Mountain Monarch and Island lodes, 1500x300 feet each; situated on the north slope of West Spanish Peak, Spanish Peak district, ten miles from La Veta; located in 1879; veins both fissures, with crevices from three to six feet wide, and pay streaks about twelve inches, containing galena and pyrites, assaying $450 per ton in gold and silver; developed by five tunnels aggregating 1,000 feet, with some other workings.

**Whale Consolidated Gold and Silver Mining Company (The).**—Owns a group of claims; situated on West Spanish Peak, Spanish Peak district, about eleven miles from La Veta; consisting of the Whale, Iowa, Nonpareil, Goss, Jeffries, Western Queen, Treasure, Monitor, Highland Lass, and Lincoln, 300x1500 feet each; veins all fissures, varying in width, and containing a carbonate and galena ore, assaying from 50 to 150 ounces silver per ton, in a decomposed gangue-matter; the developments consisting of some surface workings and a tunnel now being driven and designed to cut the veins in all the claims.

# Jefferson County.

This County is bounded on the north by Boulder, on the east by Arapahoe and Douglas, on the south by Douglas, and on the west by Park, Cloud, Clear, Creek, and Gilpin. It has an estimated population of 7,500, with Golden as the county seat, and covers an area of 792 square miles, very little of which is devoted to the pursuit of mining, although there are some coal properties, and at Golden, the seat of the State School of Mines, a number of works for the treatment of ores.

**Alice Group.**—Comprising the Alice, Ridge, Copper Chief, and Black Pine lodes; L. G. Dunnavan, Central City, Colo., G. W. Reeves, Boulder, and J. W. Venton, Coal Creek, Jefferson County, owners; claims 1500x300 feet each; situated on Coal Creek, South Boulder Mining district, fifteen miles from Golden; located July, 1881; veins all fissures, with crevices about three feet wide, containing copper glance, assaying from five per cent to sixty per cent copper and from ten to forty-eight ounces silver per ton, in a quartz gangue; developed mainly by assessment work and a shaft on the Alice forty feet deep.

**Golden Smelting Company (The).**—Incorporated under the laws of Colorado, in 1875; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, R. Koenig, Golden; secretary, Matthew Kennedy, Colorado Springs; treasurer, C. G. Buckingham, Boulder; general manager, R. Koenig, Golden; offices Golden and Boulder, Colo; owns a smelting-works, situated at Golden, consisting of main building, (frame), 225x150 feet, containing four Smelting-furnaces (one water-jacket and three roasting), Baker Blower, Blake Crusher, and Cornish Rolls, with the necessary motive power; capacity twenty-two tons per day (twenty-four hours); in connection with which is a sampling-works and assay-office; production for 1882 $659,000.

**Miner's Smelting and Reduction Company (The).**—Incorporated under the laws of Colorado, in May, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Levi C. Wade; vice-president, Albert Nickerson; secretary and treasurer, James E. Martyn—all Boston, Mass.; assistant treasurer, W. I. Adams; general manager, P. R. Smith—both Denver; offices Windsor Hotel Block, Denver, and Golden; owns a smelting and reduction works, consisting of a group of eight brick, stone, and wood buildings, with iron roofing; situated along the line of the Colorado Central Railroad for a distance of 450 feet, in Golden, and with the yards, occupying two acres; containing the latest and most approved machinery for reducing and refining all kinds of ores, besides complete sampling machinery, with the necessary motive power; capacity fifty tons per day (twenty-four hours).

**Moore Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, William Moore, Denver; secretary and treasurer, R. D. Hall; general manager, F. E. Everett—both Golden; office Golden; owns a smelting-works, built by Fraser & Chalmers, Chicago; situated at Golden, consisting of smelting-building (frame), 150x90 feet, and annex 60x30 feet, containing three Fusing and Smelting Furnaces, two Blast-furnaces, Cornish Rolls, Blake Crusher, and Baker Blower, with the necessary motive power; capacity forty tons per day (twenty-four hours); besides sampling-works, assay-office, etc.; production from January 1 to October 31, 1882, $492,000.

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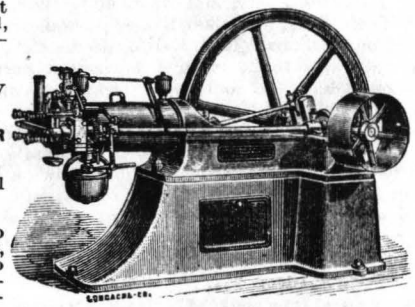
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# Lake County.

This County is situated on the east side of the Continental Divide, which separates it from Pitkin, and is bounded on the north by Summit and Eagle, on the south by Chaffee, and on the east by Park County, from which it is divided by the Park Range. It covers an area of 176 square miles, and has an estimated population of 25,000, with Leadville—the fame of which has been published in nearly all languages—as its county seat and chief center; Leadville, in fact, is the dominant factor in Lake County, and its mines make the district the leading bullion-producer in the State. In point of universal interest it is the natural successor of Australia and California. Having passed the stages of excitement and speculation, it has finally settled down into a substantial and prosperous mining center, without a rival in the extent and productiveness of its resources. According to the most careful estimates, the aggregate yield of the County from 1860 to 1877, inclusive, was $7,298,330, principally gold, from the placers and gulches. This brings us down to the Leadville period, from which time to the present the output, chiefly in base bullion, was as follows: In 1878 $3,152,925, in 1879 $10,333,740, in 1880 $14,187,697, in 1881 $12,738,902, in 1882 $16,531,853, after deducting in the latter year $600,000, the estimated value of consignments from Summit, Park, Chaffee, Gunnison, and other counties, brought to Leadville for reduction; and in the first six months of 1883, $7,942,477.

The geological problems of the district are difficult, but they are being gradually solved by practical mining, which is constantly upsetting assumptions by the unchangeable force of material facts. Multifarious theories have been advanced respecting the true source of carbonate ores, but that of Prof. S. F. Emmons seems to have received the highest endorsement. It is as follows: "The principal ore deposits of the region are found at or near the contact of the blue limestone with the overlying porphyry. The ore is not confined to the surface of the limestone, but often extends into the mass, pinching out however in depth; sometimes the bodies thus developed show no visible connection with the surface, but it is evident that they originally came from it. From the present investigations, it has been proved of the ore deposits as regards their origin: first, that they have been derived from aqueous solutions; second, that these solutions came from above; third, that they derived their metallic contents from the neighboring eruptive rocks; fourth, that in their original form they were deposited not later than the cretaceous epoch. And as regards their mode of formation: first, that the metals were deposited from their solutions mainly as sulphides; second, that the process of deposition of vein-material was a chemical interchange, or actual replacement of the rock-mass in which they were deposited; third, that the mineral solutions, or ore-currents, concentrated along natural water-channels, and followed, by preference, the bedding-planes at a certain geological horizon, but that they also penetrated the mass of the adjoining rocks, through cross-joints and cleavage-planes. And with regard to distribution: first, that the main mass of argentiferous lead ores is found in calcareo-magnesian rocks; second, that the silicious rocks, porphyries, and crystalline rocks contain proportionably more gold and copper.

"The deposits of this region are peculiarly exposed to the action of surface waters, and that they have had considerable influence upon the deposits in their original composition is certain. The prevailing and by far the most important ore, from an economical point of view, is argentiferous galena, and its secondary products, cerussite, or corbonate of lead, and kerargyri, or chloride of silver. Lead is also found as anglesite, or sulphate, as pyromorphite, or phosphate, and occasionally as oxide in the form of litharge, or more rarely minium. Silver frequently occurs as chloro-bromide, less frequently as chloro-iodide, occasionally as sulphuret, and very rarely in the native state. Chemical investigation has failed to detect sufficient regularity in the proportions of chlorine, bromine, and iodine combined with the silver to justify the determination of distinct mineral species. Gold occurs in the native state generally, in extremely small flakes, and is also said to have been found in the filiform state in galena. As accessory minerals are: zinc blende and silicate of zinc; arsenic, probably as sulphide and asarseniate of iron; antimony, probably as sulphide; copper as carbonate or silicate, bismuth as sulphide and its secondary product, a double carbonate. Tin has been detected in furnace-products, iron occurs as an ore, though in the Leadville deposits it may be considered as an essential part of the gangue or matrix, in which the valuable ore is found. In the former case it occurs in considerable bodies as pyrite or sulphide and anhydrous oxide, or red hematite with a little magnetite. The gangue may be regarded as including silica, either as chert or a granular cavernous quartz, and chemically or mechanically combined hydrous oxides of iron and manganese; a great variety of clays or hydrous silicates of alumina, generally very impure. Sulphate of baryta, carbonates of iron, pyrite, and sulphate of lime are comparatively rare."

In a few instances, as is well known, fissures and bedded deposits have been found below the first contacts in the regular course of development, and it is probable that many more would be exposed by deeper workings, thus taking the place of those nearer the surface, and perpetuating the supply of ores and bullion. Professor J. Alden Smith, in discussing this question, holds "that the ore deposits of this district came from below, through fissures originating in the granitic rocks, and extending upwards penetrating the limestones and quartzites to the contact with the overlying porphyry; that these fissures lead to many bedded veins in the limestone and quartzite, and to contact veins of more or less value between the formations last mentioned and between those and the granitic formation; and that these fissures and deposits will be extensively and profitably worked for centuries after the contact deposits now operated are exhausted.

**A. Y.**—Messrs. Harsh, Graham & Guggenheim, owners; office 108 East Fourth street, Leadville, Colo.; claim 1500x300 feet; situated on Iron Hill, California district, one mile from Leadville; located in 1879, and patented October 18, 1881; vein a horizontal contact, varying in width, and containing lead and iron carbonates in a decomposed gangue, milling, when sorted, $12.50 per ton, net, after deducting cost of mining, hauling, and treating; developed by two shafts 170 feet in depth each, with considerable drifting; improvements—steam hoisting and pumping machinery, shaft and ore houses, etc.; output from July 1, 1881, to July 1, 1882—20,000 tons.

**Ada.**—(See California and Colorado Consolidated Tunnel and Mining Company.

**Adelaide.**—(See Terrible Mining Company.)

**Ætna.**—(See Meyer Mining Company.)

**Agassiz Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1879; capital stock $2,500,000,



in 50,000 shares of $50 each, non-assessable; president, Henry H. Stotesbury; vice-president, M. F. McLanahan; secretary and treasurer, T. Chollar—all New York; superintendent and general manager, Herbert A. Ford, Leadville; offices 60 Broad street, New York City, and Room 45 Quincy Block, Leadville; owns the Agassiz and Wolf Tone, 1500x300 feet each, and the Monte Christo, 150x188 feet; situated on Carbonate Hill, California district; located in 1876 and 1877, patented in 1881 and 1882; vein a horizontal contact, varying in thickness from five to eight feet, and containing iron pyrites mixed with galena and lead carbonates (a first-class smelting-ore) in a lime-rock gangue, milling, when sorted, from twenty-five to fifty per cent lead and from twenty-five to thirty-five ounces silver per ton; developments—three shafts, seventy-five feet deep on the Agassiz, 200 feet on the Wolf Tone (both showing lead carbonates), and 704 feet on the line of the Wolf Tone and Monte Christo, the latter cutting the contact described at a depth of 635 feet, with considerable drifting and other workings; improvements—complete plants of steam hoisting and pumping machinery, shaft and ore houses, etc.; output $250,000.

**Alleghany Consolidated Mining Company (The).**—Manager, John Marshall, Leadville; owns one claim, the Alleghany; situated on Yankee Hill, above the Denver City; vein a hoirzontal contact, varying in width, and containing lead and iron carbonates in a decomposed porphyry gangue, milling, when sorted, from $15 to $30 per ton; developments—one main working shaft, with some drifting; improvements—steam machinery, shaft-house, etc.

**American Mining and Smelting Company.**—Incorporated under the laws of Illinois; capital stock $3,500,000, in 35,000 shares of $100 each, non-assessable; president, H. I. Higgins, Chicago, Ill.; vice-president and general manager, F. H. Ketcham, Leadville; secretary and treasurer, Howard P. Eels, Cleveland, Ohio; office Leadville; owns the Little Ellen Group, comprising the Little Ellen, Martha, Trade Dollar, Triangle, and Little Lulu, covering thirty-five acres of surface ground; situated on Little Ellen Hill, California district; located in 1879, and patented in 1881; vein a horizontal contact, varying in width, containing carbonates carrying both gold and silver in a decomposed gangue; developments consisting of shafts, drifts, winzes, etc., and are quite extensive, showing large ore-reserves; improvements—steam machinery, ore-houses, shaft-houses, etc.; output from March, 1881, to September, 1882, 125,000 tons; in connection with which property is a concentration-works, built by Fraser & Chalmers, Chicago; containing complete concentrating machinery, with the necessary motive power; capacity 150 tons per day (twenty-four hours).

Also owns a smelting-works, situated in California Gulch, one-half mile from Leadville, and consisting of a sampling and crushing building (frame), 60x60 feet; smelting-building (frame with iron roof), 60x95 feet, built by Fraser & Chalmers, Chicago, containing four furnaces, fifty tons daily capacity each, Blake and Comet Crushers, and six Baker Blowers; and engine-house (frame) 25x40, feet, containing two engines, sixty-five and eighty horse-power; capacity of works from 175 to 200 tons of ore in twenty-four hours, and produced from January 1, 1881, to January 1, 1882, 3,040,401 tons of bullion, valued at $878,211, and in 1882 the production was larger. (See also Eagle and Summit Counties.)

**Amie Consolidated Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, A. W. Gill; vice-president, Robt. Lenell; secretary, J. S. Lockwood; general manager, Theo. F. Van Wagenen; offices 57 Broadway, New York, and at the mine, Leadville; owns the Amie, 300x1500 feet; situated on Fryer Hill, about three-fourths of a mile from Leadville, California district; located in the fall of 1878, and patented; vein

a contact, varying in width, and containing lead carbonates in a decomposed porphyry gangue, milling, when sorted, from twenty to thirty per cent lead and from fifteen to thirty ounces silver per ton; developments—five shafts aggregating about 1,000 feet, with considerable drifting and other workings, steam machinery, shaft, ore, and dwelling houses, office, etc.; output, $1,300,000, and dividends paid $350,000.

**Annie Trapp.**—M. B. Haas and Henry Klefus, both Leadville, owners; claim 1500x300 feet; situated in Colorado Gulch, Independence district, about six miles from Leadville; located in 1879; vein a contact, varying in width, and containing galena in a quartz gangue, carrying both gold and silver; developed by one forty-five-foot shaft.

**Antelope Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-ssessable; president, Geo. E. Taylor; vice president, J. L. Pendery; secretary, H. R. Pendery; treasurer, S. T. Kostitch—all Leadville; office corner Second street and Harrison Avenue, Leadville; owns the Antelope, Ocean Wave, Deer, and Audyvan lodes, covering thirty-five acres of surface ground; situated in South Evans Gulch, California district, two miles from Leadville; located in 1879, and Antelope, Ocean Wave, and Deer in process of patent; veins all contacts, with crevices from two to four feet in width, containing lead carbonates and galena, assaying $40 net per ton, in a decomposed gangue; developed by two tunnels forty feet long each and three shafts from 50 to 100 feet in depth, with some drifting.

**Antioch.**—300x1500 feet; situated on Breece Hill, two miles from Leadville, California district; located in April, 1878, and patented in November, 1882; owners Jno. H. and S. F. Mather, Geo. S. Miller, Van H. and Frank Brooks, O. M. Webster, Thos. Gleason, and O. C. Palmer; office 602 Harrison Avenue, Leadville; vein has the appearance of a fissure, varying in width, and containing free-milling quartz, milling from $15 to $20 per ton; developed by one eighty-foot tunnel, one shaft 130 feet deep, and 330 feet of drifting.

**Argent Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; president, A. G. B. Hinkle; vice-president, J. B. Wilson; secretary, H. Huckel; treasurer, Chas. H. Graham—all Philadelphia; superintendent, J. R. Loomis, Leadville; offices 124 East Fourth street, Leadville, and 306 Stock Exchange Place, Philadelphia, Pa., Rooms 27 and 28; owns the Vining, Chieftain, and Baltimore claims, 1500x300 feet each; situated on Rock Hill, near the Rock-and-Dome mine, California district, two miles from Leadville; located in 1877, and Chieftain patented; vein a contact from four to twenty-two inches in width, containing hard and sand carbonates in a decomposed gangue, milling, when sorted, from twenty to forty per cent lead and from nine to forty ounces silver per ton; developed by three shafts on each claim, respectively, 360, 100, and 160 feet deep, with a tunnel 275 feet long on the Chieftain, and some drifting; output in 1881 $16,000.

**Argentine Group.**—(See St. Louis Smelting and Refining Company.

**Arkansas Valley Smelting Company.**—Incorporated under the laws of Missouri, May 1, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, F. L. Underwood; vice-president, August R. Meyer; secretary, Edwin E. Wilson—all Kansas City; treasurer, Louis Verdin; superintendent, Charles T. Limberg; general manager, Justus Jung; assistant superintendent, Louis Hahn—all Leadville; offices corner of Harrison Avenue and Elm street, Leadville; owns a smelting-works, comprising those formerly known as the Billing & Eiler Smelting-works, and the A. R. Meyer & Co. Milling and Sampling Company's Works; situated in Big Evans Gulch,



one and one-half miles from Leadville; consisting of one furnace-building (frame with iron roofing), 70x105 feet, containing five Smelting-furnaces, five Baker Blowers, one Farrel Crusher, two Blake Crushers, and Cornish Rolls; one engine-house (frame with iron roofing), 82x87 feet, containing two engines, fifty-horse-power each, and ore-bins with capacity for 5,000 tons; capacity of works 180 tons per day (twenty-four hours); production for 1881, 10,000 tons of bullion( and for 1882 about one-fourth larger.

**Bald Mountain.**—(See Green Mountain Consolidated Mining Company.)

**Beecher Group.**—Comprising four claims, viz., the Beecher, Tilton, Grace Greenwood, and Hector; Charles J. Moore, S. O. Thatcher, J. M. Maxwell, and Nathan Cohn, owners; office 405 Harrison Avenue, Leadville; claims cover thirty-three acres; situated on Long and Derry Hill, in Iowa Gulch, California district, four miles from Leadville; located in 1879, and patented in 1881 and 1882; vein a contact, varying in width, and containing lead carbonates carrying both gold and silver, assaying from one-half to three ounces gold and thirty ounces silver per ton, in a decomposed gangue; developed by a tunnel 800 feet and some drifts.

**Beecher and Centre.**—James McNasser and others, Leadville, owners; John L. Loomis, Leadville, manager; claims cover about seventeen acres, and are situated on Long and Derry Hill, California district; located in 1877 and 1878; Beecher patented in 1880 and Centre in process of patent; vein a contact, varying in width, and containing carbonates and chlorides in a decomposed gangue, milling, when sorted, from five to ten per cent lead and from fifty to seventy ounces silver per ton; developments—one sixty-foot shaft and a tunnel 160 feet long, with some drifting.

**Belford Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, J. B. Belford, Denver; vice-president, Jas. Streeter; secretary and treasurer, N. Rollins—both Leadville; office 303 Harrison Avenue, Leadville; owns ten claims, 300x1500 feet each, viz.: Erickson, Streeter, Eagle, Rebecca, Hi-Frank, Rising Sun, Little Clara, Old-Forty-Rounds, Green Castle, and Royal Chief; situated on Mt. Zion, one and one-half miles east of Tennessee Park, California district; located in 1881; veins all contacts, containing quartz carrying gold and silver; developments—several shafts, three of which are over 115 feet deep each, and considerable drifting, and all showing fairly.

**Belgian.**——Peter Finnerty and Richard Dillon, both Leadville, Matthew Moynahan, Alma, Omer Pennock, L. D. Roudebush, and Charles L. Wright, all New York, and David Greenfield, Georgia, owners; claim 200x120 feet; situated on the north slope of Iron Hill, California district, about two miles from Leadville; located in 1878, and patented in 1881; vein a horizontal contact, varying in width from one to five feet, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developed by two shafts 120 and 200 feet in depth and 200 feet of drifts; improvements—steam machinery, motive power supplied by a twenty-horse-power engine, with the necessary buildings.

**Belgian and Frenchman.**—Peter Finnerty, Richard Dillon, and others, Leadville, owners of the Frenchman and one-half of the Belgian (other half owned by C. C. Kellogg and M. Sweeney, both Leadville); claims cover fifteen acres; situated on Fryer Hill, California district, three-fourths mile from Leadville; vein a horizontal contact, varying in width from six to twenty-two inches, and containing carbonates and sulphurets in a decomposed

gangue, milling, when sorted, an average of thirty ounces silver per ton; developed by a shaft 100 feet in depth and considerable drifting; operated by steam machinery, motive power supplied by a fifteen-horse-power engine.

**Ben Franklin.**—(See Breece Mining Company.)

**Big Chief.**—H. A. W. Tabor, Denver, Peter Finnerty, Patrick Fahey, John McComb, Geo. Miller, and Niels Larsen, all Leadville, owners; manager, Niels Larsen; claim 1500x300 feet; situated on Carbonate Hill, adjoining the Evening Star mine, California district; located in 1878, and in process of patent; vein a horizontal contact, varying in width from six to ten feet, and containing lead carbonates in a decomposed gangue, milling, when sorted, from twenty to sixty per cent lead and from ten to seventy ounces silver per ton; developed by one 470-foot shaft, with considerable drifting, exposing large ore-reserves; improvements—one eight-inch Cornish Pump; motive power supplied by a forty-horse-power engine, with the necessary buildings; output from four to twenty tons per day.

**Big Pittsburg.**—Situated on Yankee Hill, about one mile from Leadville, California district; vein a horizontal contact varying in width, and containing lead carbonates (verv low grade) in a decomposed porphyry gangue, milling, when sorted, from $5 to $25 per ton; developments—three shafts, with considerable drifts, winzes, and stopes; improvements—steam machinery, ore-houses, shaft-houses, etc.; this property has been more or less worked during the past eighteen months by lessees, but no ore, either in sufficient quantity or quality, was found to make it pay, although it was once a famous mine.

**Black Prince.**—Situated on Breece Hill, about three and one-half miles from Leadville, California district; developments—one shaft 190 feet deep, passing through the contact at a depth of 160 feet, at which point there is some drifting, showing a horizontal contact vein varying in width, and containing an ore body running high in gold, with a small quantity of silver, and two other shafts, the deepest of which is 210 feet, with some other workings; improvements—steam machinery, motive power supplied by one twenty-horse-power engine, ore-houses, shaft-houses, etc.

**Blanche.**—M. B. Haas, Henry Klefus, and others, all Leadville, owners; claim 1500x300 feet; situated in Colorado Gulch, Independent district; located in 1879; vein a contact, varying in width, and containing galena and carbonates in a decomposed gangue, carrying both gold and silver; developed by a tunnel seventy-five feet in length and some surface workings.

**Boulder and White Cloud.**—T. Kyle, Leadville, and J. Blake Walters, Harrisburg, Pa., owners; claims 1500x300 feet each; situated on Breece Hill, above the Highland Chief mine, California district, three miles from Leadville; Boulder patented in 1880 and White Cloud in process of patent; vein a contact, about four feet wide, carrying a gold ore, milling, when sorted, as high as $80 per ton; developed by a shaft 100 feet in depth and some drifting; operated by steam machinery, motive power supplied by a fifteen-horse-power engine.

**Breece Mining Company.**—Incorporated under the laws of Colorado, in 1879; capital stock $5,000,000, in 200,000 shares of $25 each, non-assessable; president, Chas. A. Rogers, Boston, Mass.; vice-president, Theodore Seymour, New York; secretary and treasurer, J. E. Lintterlin, Philadelphia, Pa.; general manager and superintendent, M. H. Slater, Leadville; office Chicago Block, Leadville, and 34 Pine street, New York City; owns the following claims: Ben. Franklin, Gen. Cadwallader, Philadelphia, and William Penn, 1500x300 feet each; situated on Breece Hill, California district, three miles



from Leadville; located in 1875; Cadwallader and Philadelphia patented in 1882, and others in process; vein a contact, varying in width, containing hematite iron almost free from silica, phosphorus, or sulphur, as shown by a shaft 350 feet in depth, which the Company is sinking further to cut the main contact, supposed to exist lower down; improvements—steam machinery and some buildings; output 8,000 tons; dividends paid $20,000.

**Brian Boru.**—Seven acres; situated on Printer Boy Hill, two and one-half miles from Leadville, California district; located in 1877; owners A. J. Stirling, John McKenzie, and others, all Leadville; vein a contact, varying in width from one to two feet, and containing a deposit of carbonates carrying both gold and some silver in a decomposed gangue, milling, when sorted, twenty per cent lead, twenty ounces silver, and one ounce gold per ton; developed by one sixty-foot shaft, one tunnel 160 feet long, and 350 feet of drifts, stopes, and winzes; shaft-house on the property; yield $40,000.

**Bright Hope.**—M. B. Haas, Henry Klefus, and others, all Leadville, owners; claim 1500x300 feet; situated in Colorado Gulch, Independence district, six miles from Leadville; located in 1879; vein probably a fissure, with a crevice three feet wide, containing quartz carrying gold and galena; developed by a shaft sixty feet in depth, and promising fairly.

**Brookland**—Situated on Carbonate Hill, between the Morning and Evening Star and Henriette on the west, the Big Chief on the south, and the Monte Christo and Wolf Tone on the east; the three ore-chutes exploited in the Morning and Evening Star and Henriette to within a short distance of the west line of this property dip with the formation directly into the claim, the continuity of the same being established by the deep shaft of the Wolf Tone; developments—one shaft 483 feet deep, which will require an additional depth of probably seventy feet to reach the contact; improvements—steam hoisting and pumping machinery, two engines forty and fifty horse-power, shaft-house, etc.

**Buchanan.**—(See King William and Buchanan.)

**Buckeye.**—David K. Hill, Charles L. Willoughby, and Albert Dow, all Chicago, Ill., E. R. Sumner, Manitou, Colo., and Robert Eser, Leadville, owners; Geo. A. Jenks, Leadville, manager; claim covers eight acres of surface ground; situated on Fryer Hill, adjoining the Chrysolite and Little Chief properties, California district, three-fourths mile from Leadville; located in 1878, and in process of patent; vein a contact, with a crevice twenty-five feet in thickness, containing iron carbonates, assaying from ten to fifteen ounces silver per ton, in a decomposed gangue; developed by three shafts, 120, 140, and 203 feet in depth, and 100 feet of drifts; operated by steam machinery, motive power supplied by a twenty-five-horse-power engine.

**Buffalo Girl Group.**—Niels Larsen and George E. Taylor, both Leadville, owners; group comprises the Buffalo Girl, P. J. C., Trainer, Bluebird, Clam, Lake, E. L. Ausable, and J. N. Murphy; claims covering fifty acres of surface ground; situated on Little Bross Mountain, California district, four miles from Leadville; located in 1881, and all patented except Clam and Ausable; vein a contact, varying in width, and containing galena and carbonates in a decomposed gangue-matter; developments—eight shafts from 50 to 125 feet in depth and three tunnels from twenty-five to seventy-five feet long, with some drifting, and promising fairly.

**C. I. Thompson.**—Owners C. I. Thompson, Daniel Sayer, John Bergman, and R. Cline, all Leadville; claim 1500x300 feet; situated in Lake Park, Independence district, two miles from the D. & R. G. station at Tennessee Park; located in 1879, and in process of patent; vein a contact varying in

width, and containing galena and iron pyrites, assaying one and one-half ounces gold and ten ounces silver per ton, in a quartz gangue; developed by a tunnel 150 feet in length and some other workings.

**Cadillac Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Dr. John Law; vice-president, Niels Larsen; secretary, C. W. Waite; treasurer, Geo. R. Taylor; general manager, P. J. Cunningham; office 219 Harrison Avenue, Leadville; owns eight claims, 1500 x300 feet each; situated on Bald Mountain, California district, four miles from Leadville; located in 1879, and partially patented; vein a contact, varying in width, and containing more or less carbonate ore, as shown by assessment, of which the development mainly consists.

**California and Colorado Consolidated Tunnel and Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, B. F. Smith; vice-president and manager, Sylvanus Ayres, Jr.; secretary, Samuel Newhouse; treasurer, L. J. Smith; directors, B. F. Smith, W. A. H. Loveland, W. D. Daniels, S. J. Smith, J. W. Smith, Samuel Newhouse, Sylvanus Ayres, Jr.; office 101 East Third street, Leadville; owns three claims, 300x1500 feet each, viz.: Ada, Tunnel, and Everett, and a tunnel site 6x3000 feet; situated on Carbonate Hill, California district; located May 12, 1879; ore-vein a contact varying in width, and containing a deposit of lime quartz carrying silver, milling, when sorted, from $5 to $10 per ton; developments—one tunnel 800 feet long, with track laid therein, and cars.

**Capital.**—256x1500 feet; situated in Adelaide Park, two and one-half miles from Leadville, California district; located in June, 1877, and in process of patent; owners Michael Tierney, C. H. Williams, John Alford, Fred. Beaudry, and Samuel and Neil McMillen, all Leadville; vein a contact, containing what appears to be a deposit of lead carbonates in a decomposed gangue; developed by five shafts from 50 to 109 feet in depth and fifty feet of drifting.

**Carbonate.**—(See Leadville Consolidated Mining Company.)

**Carbonate Hill Mining Company.**—Incorporated under the laws of the State of New York, September, 1879; capital stock $2,000,000, in 200,000 shares of $10 each; president and treasurer, H. G. Bond; vice-president, W. F. Smith; secretary, S. H. Clapp; general manager and superintendent, George Summers; offices 115 Broadway, New York, and Leadville; owns the Yankee Doodle, a fractional claim, covering nine acres of ground; situated on Carbonate Hill, California district, about one-half mile from Leadville; patented November, 1881; vein a contact varying in width, and containing carbonates in a decomposed gangue, milling, when sorted, from ten to twenty-six per cent lead and from 50 to 160 ounces silver per ton; developed by one 1,150-foot main incline, with 5,000 feet of lateral drifts, and some stoping; improvements—steam machinery, with a train of hoisting-cars, running from 500 to 900 feet per minute; motive power supplied by a thirty-horse-power engine; shaft, ore, and engine houses; output for 1882, 3,000 tons.

**Carboniferous.**—(See Chrysolite Silver Mining Company.)

**Castle View.**—Niels Larsen, John McComb, J. Dailey, and Richard Hall, all Leadville, owners; claim covers seven and nine-tenths acres of surface ground; situated on Carbonate Hill, adjoining the Big Chief and Evening Star mines, California district, and patented in 1882; vein a horizontal contact, with a crevice from ten to twenty inches wide, containing carbonates, assaying from ten to thirty per cent lead and fifty ounces silver per ton, in a decomposed gangue; developments—one 460-foot shaft, with some drifting; improvements—steam hoisting machinery and some buildings.



**Catalpa Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president and treasurer, J. P. Whitney; secretary, H. W. Wesson; general manager, Charles L. Hall; offices 40 State street, Boston, Mass., and Leadville, Colo.; owns two fractional claims, viz.: the Catalpa and Catalpa No. 2, covering seven acres; situated on Carbonate Hill, adjoining the Evening Star, California district, one-half mile from Leadville; located in 1878, and patented in 1882; vein a horizontal contact, varying in width from two to twelve feet, and containing carbonates, with some chlorides, in a decomposed gangue, milling, when sorted, from ten to thirty per cent lead and from 25 to 100 ounces silver per ton; the ore shipped to date netting the Company about $50 per ton, after deducting the cost of mining, hauling, and smelting; developments—four shafts from 100 to 280 feet in depth and a 360-foot incline, with a large amount of drifting and other workings, showing, large ore-reserves; improvements—steam hoisting and pumping machinery motive power supplied by two engines, twelve and eighteen horse-power; ore-houses, shaft-houses, etc.; dividends paid in 1880–1 $180,000, and in 1882 $65,000.

**Cedar Rapids.**—Walter S. Cheesman, Geo. W. Clayton, both Denver, and D. D. Belden, Red Cliff, owners; claim 1500x300 feet; situated at Tennessee Park, California district, eight miles from Leadville; located in 1879, and patented in 1880; vein a contact, containing lead carbonates, assaying thirty per cent lead and ten ounces silver per ton, in a decomposed gangue; developed by a shaft eighty feet in depth, with some other workings.

**Centre.**—(See Belcher and Centre.)

**Champion Group.**—Four claims, 300x1500 feet each, viz.: Occidental, Election, and two others, and two placer claims covering eighty acres; situated at the head of Lake Creek, twenty-seven miles from Leadville, Lackawanna district; located in 1881; owners Oliver Cobey, Jno. Pentland, Henry Bentley, and Wm. Wilder, all Leadville; vein probably a fissure, varying in width, and containing free-milling quartz, the first-class ore milling three and one-half ounces gold per ton, and the second-class one and one-half ounces gold per ton; developments—three inclines, 180, 60, and 65 feet long, respectively, and three cross-cuts, ninety-two, forty, and thirty-eight feet long, respectively, with some other workings; output 100 tons.

**Champion Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, J. F. Tabor; secretary, John J. McGowan—both Leadville; office Rooms 4 and 5 Boston Block, Leadville; owns the Champion claims, covering twenty and two-thirds acres, and situated in California Gulch, California district; located in 1878; vein a contact, varying in width, and containing lead carbonates in a decomposed gangue, yielding fairly; developed by a shaft eighty feet in depth and some other workings.

**Chippewa Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, January 3, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, J. Whitaker Wright, Philadelphia, Pa.; first vice-president, C. I. Thompson; second vice-president, L. G. Kent; treasurer, C. C. Kellogg; general manager, John L. Loomis—all Leadville, Colo.; office 121 East Fourth street, Leadville, Colo.; owns the following claims: Little Chippewa, Lady Jane, Wade Hampton,

Comstock, Last Chance, Home-stake, Silver Spray, and Knock-'em-stiff, covering thirty-five acres; situated on Breece Hill, California district; located in 1878 and 1879, and in process of patent; veins all contacts, varying in width, and containing carbonates and galena in a decomposed gangue, carrying both gold and silver; developments—seven shafts from 100 to 320 feet in depth, with considerable drifts and other workings; improvements—steam machinery and some buildings.

**Chrysolite Silver Mining Company (The).**—Incorporated under the laws of New York, October 17, 1879; capital stock $10,000,000, in 200,000 shares of $50 each, non-assessable; president, R. W. Raymond; secretary and treasurer, Henry C. Cooper—both New York City; general manager, R. N. Clark, Leadville; office Leadville, Colo.; owns nine adjoining claims, including the Carboniferous and eight others; situated on Fryer Hill, California district, one mile from Leadville; located in 1878, and partially patented; veins all contacts, varying in width, and containing lead carbonates in a decomposed gangue, milling, when sorted, from $20 to $100 per ton; developments—5,025 feet of shafts, 28,796 feet of drifts, and 3,428 feet of winzes and upraises, with some other workings; improvements—steam hoisting and pumping machinery, ore-house, shaft-houses, etc.; output prior to July, 1882, 60,417 tons of ore, yielding, when sorted, 2,141,573 ounces silver, valued at $1,600,000, after deducting the cost of treatment.

**City of Salina, Leavenworth Boy, and November.**—M. B. Haas, J. J. Crook, and H. J. Rose, all Leadville, Colo., owners; claims 1500x300 feet each; situated in Big Evans Gulch, California district; located in 1880; veins all contacts, varying in width, and containing lead carbonates, assaying fairly, in a decomposed gangue; developed by three shafts from forty to fifty feet in depth.

**Claremont Mining and Milling Company.**—Incorporated under the laws of Colorado, in August, 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, L. W. Reynolds; vice-president, James Henderson; secretary and treasurer, J. R. Hammond; office 405 Harrison Avenue, Leadville; owns the following claims: Watertown, Detroit, Manhattan, Hematite, and Sylvanite, 1500x300 feet each; situated on Gold Mountain, California district, two miles from the Red Cliff branch of the D. & R. G. R'y; located in 1879, and patented in 1881; vein a contact, varying in width, and containing lead carbonates in a decomposed gangue; developed by a 400-foot incline and a 200-foot shaft, with some other workings; output three tons per day.

**Clear-grit.**—(See Ella Bella and Clear-grit.)

**Climax Contract.**—Four acres; situated on Fryer Hill, one-half mile from Leadville, California district; located in 1878; owners A. W. Gill, A. H. Fowler, L. J. Laws, and others, Leadville; vein a contact, varying in width, and containing a deposit of lead carbonates, in a decomposed gangue, milling, when sorted, from ten to fifty ounces silver per ton; developments—one shaft 180 feet deep and 400 feet of drifting; worked by steam machinery.

**Climax Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Harry Allen; secretary, H. F. Pierron—both New York; general manager, T. F. Van Wagenen, Leadville; owns the Climax, 1500x300 feet; situated on Fryer Hill, California district, about three-fourths mile from Leadville; vein a contact, from six to thirty-two inches wide, containing a low-grade ore, principally iron, carrying a small amount of silver, with some lead carbonates, in a decomposed porphyry gangue, milling, when sorted,



twenty-five per cent lead and twenty ounces silver per ton; developments—seven shafts aggregating 900 feet, with about 400 feet of drifting and other workings; output $700,000; dividends paid $250,000.

**Clontarf.**—(See St. Bernard Mining Company.)

**Coffee.**—(See Hawkins, Long & Derry Mining and Tunnel Company.)

**Collateral.**—Situated on Iron Hill, adjoining the Smuggler, California district; developments---one main shaft 145 feet deep, over which is a shaft-house with a whim hoister, and a drift running from the shaft towards the Smuggler 112 feet long, with two cross-cuts twenty-eight and forty feet in length, showing a contact vein, containing a deposit of hard carbonates, assaying from twenty-five to fifty per cent lead and from twenty-five to sixty ounces silver per ton, above which drift are five upraises, exposing from four to twenty feet of low-grade mixed mineral; additional workings—one drift also from the shaft 150 feet long, cutting iron mixed with manganese and a streak of sand carbonates.

**Colonel Sellers Group.**—Comprising the Colonel Sellers and Accident; owners T. C. Stebbins and Lyman Robison, both Toledo, Ohio, Geo. N. Simmons, Norwalk, Ohio, Wm. F. Patrick and J. C. Whitney, both St. Louis, Mo., and John Livzey, Philadelphia, Pa.; manager, T. C. Stebbins; office Leadville, Colo.; claims cover sixteen acres; situated on Iron Hill, California district, two miles from Leadvilie; located in 1878, and in process of patent; vein a contact, varying in width, and containing a deposit of lead and iron carbonates in a decomposed gangue, milling, when sorted, sixty per cent lead and thirty-five ounces silver per ton; developed by one main shaft 600 feet deep, with other shafts and considerable drifting, showing large ore-reserves; improvements—hoisting and pumping machinery (motive power supplied by a fifty-horse-power engine), ore-houses, shaft-houses, etc.; daily shipments from ten to thirty tons.

**Colorado Land and Mineral Company (The).**—Incorporated under the laws of New York, in April, 1882; president and managing director, Charles H. Collins, Leadville; secretary and treasurer, Oliver T. Hungerford, New Hartford, Conn.; manager, Timothy Kyle, Leadville; offices Wall street, New York, and Leadville, Colo.; owns the following claims: Dexter, Monument, Whale, and Yomp, covering thirty-five acres; situated in Hayden's Gulch, Lake Creek district; located in 1880; veins all contacts, varying in width, and containing a galena and copper ore in a lime-rock gangue, milling, when sorted, fourteen per cent lead, twenty per cent copper, and 175 ounces silver per ton; developed by four tunnels thirty-five feet each in length, with some other workings; the Fitz Hugh, covering seven acres; situated on Fryer Hill, about three-fourths of a mile from Leadville, California district; located in 1878, and patented in September, 1882; vein a contact, varying in width, and containing lead carbonates in a decomposed gangue; developments—one 250-foot shaft and some other workings.

**Colorado Mine Developing Company.**—Incorporated under the laws of Colorado, in 1879; capital stock of $200,000, in 2,000 shares of $100 each; president and treasurer, J. F. Humphries, Leadville, Colo.; vice-president and manager, John L. Loomis, Leadville; secretary, John R. Mathews, Denver, Colo.; office 121 East Fourth street, Leadville; owns the Red Fox, Gray Fox, Honest John, Windsor, and Gray Eagle, covering forty-three acres; situated on Mount Zion, California district, four miles from Leadville; located in 1879; vein a contact varying in width, and containing carbonates and chlorides in a decomposed gangue, assaying fairly; developed by a tunnel 440 feet in length, and three shafts, twenty-five, forty, and sixty feet in depth, with some drifting.

**Colorado No. 4.**—Eight acres; situated on Iron Hill, near Leadville, California district; located in 1879, and patented August, 1882; owners M. B. Haas, J. L. Pendery, J. C. Fuller, H. L. Pierce, S. A. Biggs, and W. A. Harris, all Leadville, and John Kirch, Leavenworth, Kas.; vein a contact varying in width, and containing a deposit of lead and iron carbonates, assaying seventy-three ounces silver per ton, in a decomposed gangue; developed by 290 feet of shafting with some drifts.

**Columbia.**—Peter Finnerty, Max Williams, and J. B. Dubois, all Leadville, owners; claim 1500x300 feet; situated in Little Evans Gulch, California Mining district, two and one-half miles from Leadville; located in 1878, and patented in 1880; vein a horizontal contact from four to twelve inches in width, and containing carbonates in a decomposed gangue, milling, when sorted, thirty-five ounces silver per ton; developed by a shaft 240 feet in depth, with some other workings.

**Compromise Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $5,000,000, in 200,000 shares of $25 each, non-assessable; president; Wm. R. Thompson; vice-president, John S. Doughty; secretary, W. D. Huntley; treasurer, Geo. W. Turnes—all Philadelphia, Pa.; office 310 Chestnut street, Philadelphia, Pa.; owns one claim, the Compromise, covering three and one-half acres; situated on Fryer Hill, adjoining the Robt. E. Lee mine, California district; located in 1879, and patented in 1882; vein a contact varying in width, and containing lead carbonates with some sulphides and bromides in a decomposed gangue, milling, when sorted, from 30 to 150 ounces silver per ton; developed by two shafts 280 feet in depth each, with some drifting; improvements—steam hoisting and pumping machinery; motive power supplied by one twenty-horse-power engine, with the necessary buildings.

**Comstock.**—Peter Finnerty and others, Leadville, owners; claim 1500x300 feet; situated on Breece Hill, California district; located in 1877, and in process of patent; vein a contact, varying in width, and containing galena in a lime-rock gangue; developments—one 355-foot shaft, with some drifting; improvements—steam machinery, motive power supplied by a fifteen-horse-power engine, with the necessary buildings.

**Comstock.**—300x1500 feet; situated on Iron Hill, two and one-half miles from Leadville, California district; located in 1877, and in process of patent; owners S. H. Foss, Timothy Foley, Scott Kelley, and Samuel McMillen, all Leadville, and S. R. Ainsley, Denver; vein a contact, varying in width, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, twelve per cent lead and thirty-two ounces silver per ton; developed by one shaft 175 feet deep and fifty feet of drifting,

**Comstock Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, James N. Templar; secretary, A. R. Brown; treasurer, Wm. H. Louthan; superintendent, Patrick Walsh—all Leadville; office Rooms 17, 18, and 19, Howell Block, Leadville; owns the following claims: Comstock, 3000x50 feet, and Black-tail, 1500x300 feet; situated on Printer Boy Hill, California district, three miles from Leadville; located in 1869 and 1871; vein a contact, varying in width, and containing lead carbonates in a decomposed gangue, as shown by the developments, consisting mainly of assessment workings.

**Consolidated Yankee and Breece Hill Mining Company (The).**—Incorporated under the laws of Colorado, in June 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable



president, I. A. Rosecrans; vice-president, C. I. Thompson; secretary and Treasurer, C. C. Kellogg; general manager, J. L. Loomis—all Leadville; office 121 East Fourth street, Leadville; owns the following claims: Loveland, Superior, Dubuque, Keystone, Caledonia, Theresa, Mountain Boy, and California Gulch, covering forty-five acres; situated between Yankee and Breece Hills, California district; located in 1878 and 1879, and in process of patent; veins all horizontal contacts, varying in width, and containing deposits of iron and lead carbonates in a decomposed gangue; developments on the Loveland consist of one 200-foot shaft, on the Superior one 303-foot shaft, on the Dubuque one 120-foot shaft, on the Keystone two shafts 150 and 285 feet in depth, on the Caledonia one 280-foot shaft, on the Theresa one 350-foot shaft, and on the California Gulch one 120-foot shaft, besides more or less drifting on each claim, showing large ore-reserves; improvements—steam machinery, with the necessary buildings.

**Consolidated Tiger Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $400,000, in 8,000 shares of $50 each, non-assessable; president and manager, Robert Bunsen, Leadville; vice-president, Chas. Eneu Johnson; secretary, S. E. Bruckman; treasurer, Louis J. Ladner—all Philadelphia; office 140 West Sixth street, Leadville, Colo.; owns the following claims: Tiger, North Star, Nellie, Rosa, and Last Chance, covering thirty-four acres; situated on Tiger Hill, or Bald Mountain, California Mining district, three miles from Leadville; Rosa, North Star, and Last Chance patented in 1881 and 1882; veins all horizontal contacts, containing lead carbonates and free-milling gold ore; Tiger developed by three shafts from 75 to 160 feet in depth, North Star by a 125-foot shaft, with some other shafts and drifting, exposing considerable mineral; output $10,000.

**Crescent Mining Company (The).**—Incorporated under the laws of New York in 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president and treasurer, J. P. Whitney; secretary, H. W. Wesson—both Boston, Mass.; superintendent and manager, Chas. L. Hill, Leadville, Colo; offices 40 State street, Boston, Mass., and Leadville; owns one claim, the Crescent, covering ten and one-third acres; situated on Carbonate Hill, adjoining the Catalpa, California district; located in 1878, and patented in 1882; vein a contact varying in width, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, from ten to thirty-five per cent lead and from 25 to 100 ounces silver per ton; developed by three shafts, 150, 190, and 260 feet in depth, and one ninety-foot incline, with considerable drifting, exposing large ore-reserves; improvements—steam machinery, motive power supplied by two engines ten and fifteen horse-power, with ore and shaft houses, etc.

**Crown Point and Pinnacle.**—Nelson Hallock, Denver, Colo., owner; claims cover fourteen and five-sixths acres; situated on Iron Hill, crossing the La Plata, California district; vein a horizontal contact, varying in width from three to twelve feet, and containing lead and iron carbonates in a decomposed gangue, milling, when sorted, twenty-five per cent lead and from twenty to thirty ounces silver per ton; developed by three shafts, 130, 197, and 325 feet in depth, with some drifting, exposing large ore-reserves; improvements—steam machinery, with the necessary buildings; monthly shipments fifty tons.

**Cummings & Finn's Smelting-Works.**—M. J. Cummings, Oswego, N. Y., and Nicholas Finn, Leadville, proprietors; works established in May, 1879, and situated between Fryer Hill and Big Evans Gulch, one mile from Leadville; consisting of smelting-building (frame), 160x90 feet, containing five Blast-furnaces of Fraser & Chalmers' make; engine-house, 50x60 feet, containing two engines, twenty-five-horse-power each, and ore-sheds;

capacity from 3,000 to 5,000 tons; smelting capacity 125 tons per day (twenty-four hours); in connection with which is a sampling-works, capacity 200 tons per day (twenty-four hours); production from January 1, 1882, to September 1, 1882, 4,200 tons of bullion, representing 400,000 ounces silver.

**Cushing.**—W. R. Hall, Leadville, owner; J. R. Curley and D. D. Condon, both Leadville, lessees for one year, ending August 3, 1883; claim 1500x300 feet; situated on the Stray Horse Gulch slope of Yankee Hill, adjoining the Adelaide, California district, three-fourths mile from Leadville; located in 1879; vein a contact from one to five feet wide, and very irregular, containing lead carbonates and galena in a decomposed gangue, milling, when sorted, from ten to fifty per cent lead and from five to twenty ounces silver per ton; developed by two shafts fourteen and ninety feet in depth, with some drifting.

**Cyclops.**—(See Marian Mining Company.)

**Daisy Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, Elisha W. Davis, Leadville; secretary and treasurer, Wm. H. Tabor; general manager, Lucius Rogers—both Philadelphia; offices 435 Chestnut street, Philadelphia, and Leadville; owns the following claims: Daisy No. 1, Daisy No. 2, Elk, Ethel, Davis, Rogers, and Kimball, covering sixty-five acres; situated at the head of Big Evans Gulch and on Mosquito Mountain, California district, six miles from Leadville; located in 1880 and 1881, and in process of patent; veins all contacts, varying in width from one to six feet, containing argentiferous galena in a lime-rock gangue, milling, when sorted, forty-six ounces silver per ton; developments—on Daisy No. 1 250 feet of tunnel and fifty feet of drifts; on the Elk 175 feet of tunnels, and on the other claims about 150 feet of work.

**Davenport Silver Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $1,200,000, in 120,000 shares of $10 each, non-assessable; president, N. Rollins; vice-president, J. W. Vardermark; secretary and superintendent, John H. Reynolds; treasurer, Jno. P. Young—all Leadville; office 303 Harrison Avenue, Leadville; owns two claims, 300x1500 feet each, viz.; Davenport and Camp Point; situated on Long and Derry Hill, eight miles from Leadville, California district; located in 1880; vein a contact, varying in width, and containing what appears to be a deposit of lead corbonates, in a decomposed gangue; developed by two shafts ninety-six and thirty feet deep, respectively.

**Denver City Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, March 1, 1880; capital stock $5,000,000, in 5000,000 shares of $10 each, non-assessable; president, J. Whitaker Wright; treasurer, Edward D. Cope; secretary, Geo. L. Smedley—all Philadelphia, Pa.; general manager, Robert Bunsen, Leadville, Colo; offices 140 West Sixth street, Leadville, and Exchange Building, Philadelphia; owns one-half interest in the Denver City, Shamus O'Brien, and Quadrilateral claims, covering fourteen acres, the other half interest being owned by the Lee Basin Mining Company; situated on Fryer Hill, California district, about three-fourths mile from Leadville; located in 1878, and the Denver City patented; vein a contact, varying in width from four to forty-eight inches, containing chlorides, sulphurets, and lead carbonates, mainly a dry-milling ore in a decomposed gangue, milling, when sorted, from 30 to 150 ounces silver per ton; developments—three shafts, one on each claim, 312, 365, and 315 feet in depth, respectively, with considerable drifts, winzes, and other workings, the Denver City shaft exposing a large body of iron, sometimes quite rich in chlorides, and again almost barren in silver; improvements—hoisting and pumping machinery; motive power supplied by a sixty-horse-power engine; output $35,000.



**Dexter.**—(See Colorado Land and Mineral Company.)

**Dirk.**—H. T. Dodge, Gustaf Hansman, and Julius G. Ahrhardt, all Leadville, owners; claim 1500x300 feet; situated on Long and Derry Hill, four miles from Leadville, California district; located in 1879, and patented in 1881; vein a contact, varying in width, and containing carbonates and galena, assaying twenty per cent lead and forty-three ounces silver per ton, in a decomposed gangue; developed by a shaft ninety feet in depth and a tunnel ninety feet in length.

**Dolphin Mining Company (The).**—Incorporated under the laws of Colorado, August 26, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, August Riche; vice-president, Thos. I. Richman; secretary, T. J. Hurley; treasurer, Peter Finnerty; manager, Chas. L. Hall; office 300 Harrison Avenue, Leadville, and 18 Wall street, New York; owns the Dolphin, covering eight acres; situated on Fryer Hill, about one mile from Leadville, California district; located in 1878, and patented in 1881; vein a contact, varying in width, and containing a deposit of chlorides or bromo-chlorides of silver, formed from the decomposition of argentiferous sulphides, somewhat similar to the Robert E. Lee ore, milling from 25 to 250 ounces silver per ton, when sorted from the gangue-rock; developments—three shafts aggregating 300 feet and 1,500 feet of drifts, exposing large ore-reserves; worked by a twenty-horse-power engine; aggregate output $150,000.

**Double-Decker.**—300x1500 feet; situated on the Stray Horse Gulch slope of Yankee Hill, one and one-half miles from Leadville, California district; located in 1878, and patented in 1881; owners C. R. Griggs, New York City, Col. A. J. Ware, Breckenridge, C. N. Priddy and A. Filby, Denver; vein a horizontal contact, from six to fifty inches thick, with quartzite walls, containing lead carbonates in a quartzite gangue, milling, when sorted, three and one-half ounces gold and seventy-six ounces silver per ton, some of it being of remarkable richness; developed by three shafts, 105, 113, and 136 feet deep, with 1,000 feet of drifts and other workings; improvements—hoisting machinery; motive power supplied by a twenty-six-horse-power engine, and some buildings; output 350 tons.

**Dunkin Mining Company (The).**—Incorporated under the laws of Colorado, in October, 1879; capital stock $5,000,000, in 200,000 shares of $25 each, non-assessable; president, Henry H. Stotesbury; vice-president, M. F. McLanahan; secretary and treasurer, T. T. Chollar—all New York City; general manager and superintendent, Henry A. Ford, Leadville; office 60 Broadway, New York, and 45 Quincy Block, Leadville; owns the Dunkin, covering eight acres; situated on Fryer Hill, one mile from Leadville, California district; located in 1879, and patented in 1882; vein a contact, varying in width as shown by four shafts, from 220 to 300 feet in depth and a large amount of drifting and other workings, the Robinson shaft at about seventy feet from the surface and passing through a large body of iron ore, and cutting the contact on which a drift is run through the low-grade iron for a distance of eighty feet, encountering sand carbonates and afterwards chlorides, which with the iron, make three classes, the first milling, when sorted, 3,000 ounces, the second 500 ounces, and the third fifty ounces silver per ton, there however remaining large quantities of too low a grade to handle; improvements—steam hoisting and pumping machinery, and a number of buildings; aggregate output $775,000.

**Dutch Kate.**—(See Eagle-nest Hill Mining Company.)

**Dyer Mining Company (The).**—Incorporated under the laws of Illinois, in 1879; capital stock $150,000, in 15,000 shares of $10 each, non-

assessable; president, Samuel Pike; secretary and treasurer, J. P. Young—both Chicago; general manager, A. B. Capron, Leadville; offices 122 Fifth Avenue, Chicago, and 109 South Harrison Avenue, Leadville; owns two claims, viz.: Dyer, 1500x300 feet, and the Hawthorn, 1500x200 feet; situated on the west face of Silver Point Mountain, near the head of Iowa Gulch, California district; located in 1878, and patented in 1882; vein a contact, varying in width, and containing carbonates and galena, with some sulphurets, in a decomposed gangue, the first-class ore milling, when sorted, fifteen per cent lead and 600 ounces silver, and the second-class 150 ounces silver per ton; developments—three tunnels from 150 to 275 feet in length, with some drifts and other workings; output for 1882 $12,000.

**Eagle-nest Hill Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; working capital $1,000,000; president and treasurer, Jeremiah A. Greenlaw; secretary, Ronald A. Stuart—both Park City; general manager, Wm. Gillaspie, Twin Lakes; office Leadville (P. O. box 806); owns the Dutch Kate, Whale's Tail, Catfish, Pontiac, Blackeye, Jay-bird, and Eagle's-nest, 1500x300 feet each; situated on Lake Creek, Lake district, three and one-half miles from Twin Lakes; veins probably fissures, with crevices from three and one-half to five feet wide, the Dutch Kate containing quartz carrying gold and silver, assaying two ounces gold and seventy ounces silver per ton, and the others sulphurets of silver, assaying from 30 to 120 ounces silver per ton, in a quartz gangue; Dutch Kate developed by a tunnel 150 feet in length, and the others by two tunnels 100 feet long each and four shafts from twenty to fifty feet in depth, and some other workings.

**Eddy, James & Co.'s Sampling-Works.**—Edward Eddy, Wm. H. James, and James B. Grant, all Denver, owners; works situated at Leadville; main building 140x80 feet, containing Cornish Rolls, Blake Crushers, and complete machinery for sampling, with the necessary motive power; capacity 275 tons per day.

**Elgin Smelting Company (The).**—President, Albert Sherwin; secretary and treasurer, S. D. Wilder—both Leadville; office Leadville; owns a smelting-works; situated on Stray Horse Gulch, about one mile from Leadville; containing two furnaces and other complete and improved machinery for the treatment of ores, with the necessary motive power; now under lease to the Manville Smelting Company.

**Elk Commodore.**—Jeremiah A. Greenlaw and R. A. Stuart, both Park City, and T. E. Stuart, Boston, Mass., owners; claim 1500x300 feet; situated on Twin Peak, Lake Creek district, two miles from Twin Lakes; located in 1881; vein a fissure, with a crevice twenty feet wide, containing yellow copper and galena, assaying twenty-five per cent lead, two ounces gold and sixty-two ounces silver per ton, in a quartz gangue; developed by two tunnels, thirty feet long each.

**Ella Bella and Clear-grit.**—William J. Lewis, Charles J. Moore, Charles H. Keyes, and J. B. Jillach, all Leadville, owners; claims 1500x300 feet each; situated in Iowa Gulch and on Long and Derry Hill, California district, four and one-half miles from Leadville; vein a contact, varying in width, and containing carbonates and galena, in a decomposed gangue; developed by 340 feet of tunnels and some other workings.

**Emma.**—Covering eight acres; situated on Breece Hill, California district, and patented in July, 1880; owners M. D. Brown, John M. Beverly, and Andrew Pierson, all Chicago, Thomas Wright, C. W. Waite and Max Boehmer, all Leadville; vein appears to be a fissure about eighteen inches in width, containing quartz carrying some gold; developments—one shaft 210 feet deep, and some drifting.



**Emma Bell.**—Max Williams, Wm. Clapman, Wm. K. Burchinell, and Isaac Kohn, all Leadville, owners; claim covers one-third acre; situated on Yankee Hill, adjoining the Big Pittsburgh mines, California district; located in 1880; vein a horizontal contact, from six to thirty-six inches in width, containing lead carbonates in a decomposed gangue, milling, when sorted, fifty per cent lead and fifty ounces silver per ton, developed by a shaft 224 feet in depth and a drift 200 feet in length.

**Emma Haas.**—M. B. Haas, Patrick Riley, and W. Milner, all Leadville, owners; claim 1500x300 feet; situated in Bird's-eye Gulch and on the Mosquito Range, California district, one and one-half miles from the London mine; vein a contact, varying in width, and containing galena and carbonates, assaying fifty per cent lead and from thirty to sixty ounces silver per ton, in a porphyry gangue; developed by a shaft thirty-five feet in depth.

**Emma Mining Company (The).**—Incorporated under the laws of Colorado, November 6, 1879; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, A. W. Kelso; vice-president and general manager, J. M. Wallace; secretary and treasurer, W. R. Chadbourne, all Leadville; office Room 25 Boston Block, Leadville, Colo.; owns one claim, the Emma, 1500x300 feet; situated on Bald Mountain, California district; located in 1878, and patented March 15, 1881; vein a horizontal contact, varying in width, and containing lead and iron carbonates in a decomposed gangue; developments—two shafts, fifty feet deep each.

**Emmet Mining Company (The).**—Incorporated under the laws of Colorado in January, 1882; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, J. A. Hawkes, Circleville, Ohio; vice-president, C. C. Howell, Leadville, Colo.; secretary, O. Ballard, Circleville, Ohio; treasurer N. S. Gregg; general manager, C. C. Howell, both Leadville; offices Room 8, Chicago Block, Leadville, Colo., and Circleville, Ohio; owns the Emmet and nine other adjoining claims, covering sixty acres surface ground; situated in California Gulch, California district one and one-half miles from Leadville; veins all horizontal contacts, with crevices from six inches to four feet wide, containing carbonates, galena, and iron, in a decomposed gangue, milling, when sorted, thirty per cent lead and from twenty-five to fifty ounces silver per ton; developed by fifteen shafts from 10 to 225 feet in depth with some other workings.

**Enterprise Mining and Prospecting Company (The).**—Incorporated under the laws of Colorado in 1879; capital stock $800,000, in 80,000 shares of $10 each, non-assessable; peesident, Horace Steele, Painesville, Ohio; vice-president, W. R. Thompson; secretary and treasurer, Geo. C. Steele—both Leadville; office 404 Harrison Avenue, Leadville; owns two claims, viz.: the Forepaugh and Alpha; situated on Fryer Hill, adjoining the Robert E. Lee mine, California district, three-fourths mile from Leadville; located in 1877, and patented in 1881; vein a contact, with a crevice from four to sixty inches, containing lead carbonates, assaying from 25 to 500 ounces silver per ton, in a decomposed gangue; developed by two shafts 190 and 330 feet in depth, with some drifting; improvements—steam hoisting and pumping machinery; motive power supplied by two engines twenty-five and forty horse-power, with the necessary buildings.

**Evangeline.**—Geo. L. Camp, John Pritchett, and Margaret Rose, Tin Cup and Leadville, owners; claim 1500x300 feet; situated near Tennessee

Park, in Tennessee Park district, six miles from Leadville; located in 1881; containing two horizontal contact veins, with crevices from twelve to twenty-six inches, containing carbonates carrying both gold and silver; developed by one sixty-foot shaft.

**Evening Star Mining Company (The).**—Incorporated under the laws of New York in 1879; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, W. B. Dickerman; secretary and treasurer, Henry K. McHarg; general manager, W. S. Ward; office Room 19, No. 2 Wall street, New York, and at Leadville, Colo.; owns the Evening Star, a fractional claim 1300x150 feet, or about five acres; situated on Carbonate Hill, California district, one-half mile from Leadville; located in 1878, and patented in 1879; vein a contact, varying from six inches to fifty feet in width, containing lead ore and carbonates, with some silver chlorides in a decomposed gangue, milling, when sorted, thirty per cent lead and forty ounces silver per ton; developments—four shafts from 150 to 400 feet in depth, with a large amount of drifts, winzes, and other workings; improvements—four engines, one for each shaft, for hoisting and pumping, four shaft-houses, saw-mill, blacksmith-shop, carpenter-shop, assaying-office, etc.; output for 1879, 4,380,863 pounds of ore; for 1880, 13,284,438 pounds; for 1881, 33,887,567 pounds; and for the first six months of 1882, 38,074,790 pounds; total output to July 1, 1882, 89,627,654 pounds; dividends paid, fifty-three of $25.000 each.

**Excelsior Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $1,500,000, in 75,000 shares of $20 each, non-assessable; president, J. Rust; secretary, H. H. C. Miller; general manager, Van. H. Brooks; office Leadville; owns two fractional claims, Little Hattie and Adelphie; situated on Breece Hill, California district, two miles from Leadville; located in 1878, and patented in August, 1882; veins possibly fissures, varying in width, and containing gold-bearing quartz, as shown by 400 feet of shafting and some drifts.

**Faint Hope.**—(See Long and Derry Group.)

**Fairplay.**—Situated on Yankee Hill, about one mile from Leadville, California district; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed porphyry gangue, milling, when sorted, from 25 to 100 ounces silver per ton, and the ore body increasing with development, both in quantity and quality.

**Fairview.**—1500x300 feet; situated in Stray Horse Gulch, adjoining the Double-Decker mine, about one and one-half miles from Leadville, California district; located in June, 1878; vein a horizontal contact, varying from six to fifty inches in width, and containing lead carbonates in a quartzite gangue, milling, when sorted, from 25 to 100 ounces silver per ton; developed by two shafts 80 and 180 feet in depth, with some drifts and other workings, and promising fairly; improvements---steam machinery, with ore-house, shaft-houses, etc.

**Falls.**—Jeremiah A. Greenlaw, Park City, and F. E. Stuart, Boston, Mass., owners; claim 1500x300 feet; situated in Lake Creek, Lake Creek district, one and one-half miles from Twin Lakes; located in 1879, in process of patent; vein probably a fissure, seven feet wide, containing gold and silver bearing quartz and galena, assaying twenty-seven per cent lead, one-half ounce gold, and 200 ounces silver per ton; developments—one twenty-foot tunnel and one fifty-six-foot shaft.



**First National.**—Philip Highley, Boston, Mass., owner; Wm. Trimble, Leadville, manager; claim 1500x300 feet; situated in Iowa Gulch, California district; located in 1878, and patented in 1881; vein a contact, with crevice seven feet wide, containing galena and carbonates, assaying thirty per cent lead and twenty-seven ounces silver per ton; developed by a shaft 212 feet in depth and a drift of 200 feet in length; improvements—steam machinery, motive power supplied by a twenty-horse-power engine.

**Fitz Hugh.**—(See Colorado Land and Mineral Company.)

**Florence.**—300x1500 feet; situated in Frying-pan Gulch, six miles from Leadville, California district; in process of patent; owners Sylvanus Ayres, jr., and others, Leadville; vein a horizontal contact twelve feet wide, pay streak four feet, containing galena in a quartz gangue, which mills, when sorted, three per cent copper, ten per cent lead, and from 100 to 150 ounces silver per ton; developments—one shaft 150 feet deep, with inclines and drifts, worked by steam machinery; output 100 tons.

**Forepaugh.**—(See Enterprise Mining and Prospecting Company.)

**Forest City.**—(See Small Hopes Mining Company.)

**Forfeit.**—Clinton Reed, A. Z. Terhone, J. T. Campion, and J. T. Sanders, all Leadville, owners; J. F. Campion manager; office corner Harrison Avenue and West sixth street, Leadville, Colo.; claim 1500x300 feet; situated on Iron Hill, adjoining the Smuggler, California district, two miles from Leadville; located in 1880, and in process of patent; vein a contact, with a deposit of lead and iron carbonates from six inches to four feet wide, in a decomposed gangue, milling, when sorted, fifty per cent lead and twelve ounces of silver per ton; developed by three shafts, 170, 200, and 240 feet in depth, with considerable drifts and other workings, said to expose large ore-reserves; improvements—steam machinery, motive power supplied by an eight-horse-power engine; monthly shipments 350 tons.

**Garbutt.**—W. S. Cheesman and G. W. Clayton, both Denver, and D. D. Belden, Red Cliff owners; claim 1500x300 feet; situated on Breece Hill, adjoining the Highland Chief, California district, three miles from Leadville; located in 1878, and patented in 1879; vein a horizontal contact with a crevice from eight to fifteen feet in width, containing lead carbonates, in a decomposed gangue; developed by one shaft 110 feet in depth, with some drifts.

**Garden City.**—Isaac Westerdal, David Curran, and James R. Milburn and others, all Leadville, owners; claim 1500x300 feet; situated in California Gulch, California district; located in 1877, and patented in 1881; vein a contact, with a crevice four and one-half feet wide, containing galena and carbonates in a decomposed gangue, milling, when sorted, thirty per cent lead and twenty ounces silver per ton; developed by two shafts 75 and 235 feet in depth, with some drifts exposing large ore-reserves.

**Geneva.**—A. Hitchcock, Leadville, H. Storms, C. J. Goss, and P. E Morehouse, all Denver, and J. H. Potter, Breckenridge, Colo., owners; claim 1200x300 feet; situated on Breece Hill, California district, three miles from Leadville; located in 1877, and patented in 1880; vein a contact, containing a deposit three feet wide composed of carbonates, assaying $12.50 per ton in gold and silver in a decomposed porphyry gangue; developed by a tunnel 400 feet in length.

**Gertrude.**—300x1500 feet; situated in Frying-pan Gulch, five and one-half miles from Leadville, Independence district; located in May, 1879;

vein probably a fissure, fifteen feet wide, pay streak forty inches, containing quartz and galena, milling, when sorted, $45 per ton; developed by three shafts from thirty-five to fifty feet in depth, together with some drifting; output 100 tons.

**Gilt Edge.**—Situated on the west slope of Breece Hill, adjoining the Mike and Star; vein a contact, varying in thickness, and containing carbonates and sulphides in a decomposed gangue, the former milling, when sorted, from $20 to $50 per ton, and the latter being refractory and of too low a grade to stand the excessive cost of reducing it—carrying no copper or gold, as in the case of the Mike and Star; developments—considerable shafting and drifts.

**Glass-Pendery Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1882; capital stock $5,000,000, in 250,000 shares of $20 each, non-assessable; president, H. V. P. Block; vice-president and secretary, C. A. Manners; treasurer, G. W. Trimble; general manager, J. W. Wallace; office 221 West Chestnut street, Leadville, Colo.; owns the following claims: Glass, Judge Pendery, and Rough-and-Ready No. 2, covering four acres; situated on Carbonate Hill, adjoining the Catalpa and Crescent, California district; located in 1878 and 1879, and patented; vein a horizontal contact, from one to six feet wide, containing lead carbonates, with some rich chlorides in a decomposed porphyry gangue, milling, when sorted, from 20 to 600 ounces silver per ton; developments—three shafts aggregating 1,000 feet and about three-fourths of a mile of drifting, in running one of which a body of chlorides sixteen inches wide was struck, some of which yielded as high as $5,000 per ton, and the property has produced largely; improvements—steam hoisting and pumping machinery, ore and shaft houses, etc.; last dividend $25,000, paid in April, 1881.

**Glengary Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in August, 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Albert Sherwin; secretary and treasurer, S. D. Wilder—both Leadville; manager, James W. Kennedy, Breckenridge; office Leadville; owns three fractional claims, covering twenty acres, viz.: Glengary, Yates, and Eclip; situated on Breece Hill, three miles from Leadville, California district; located in 1879 and 1880, and patented in 1881; vein a horizontal contact, three feet wide, containing lead and iron carbonates scattered through the porphyry and lime vein-matter, the ore from the Glengary milling, when sorted, from $20 to $30 per ton in silver and gold; developed by four shafts, 90, 170, 185, and 200 feet deep, respectively, with some drifting; three shaft-houses on the property.

**Gold Crown.**—M. A. Lawrence, Alma, Colo., and S. C. Whiting, Laporte, Ind., owners; claim 1500x300 feet; situated on the Park Range, at the extreme head of the Arkansas River, Alicanta district, ten miles from Leadville, containing two fissure veins, with crevices forty feet wide, with gold-bearing quartz scattered through the vein-matter, assaying from one to six ounces gold per ton; developed by one thirty-two-foot tunnel.

**Gold Stake.**—Chas. A. Gordon, Wheeler, and John Lundbeck, Twin Lakes, Colo., owners; claim 1500x300 feet; situated on Mt. Elbert, Independence Mining district; located in 1882; vein probably a fissure, with a crevice two feet wide, and a pay streak eight inches, containing gold and silver bearing quartz, assaying $80 per ton; developed by a tunnel twenty feet in length.

**Graham Placer.**—Thos. Graham, Leadville, owner, and leased until October 21, 1883, to Edward Cain, H. P. Marston, and J. E. Evans, all Leadville; claim covers 100 acres; situated in California Gulch, California Mining district; located in 1862; developed by a shaft fifty feet in depth and some other workings.



**Grand View.**—D. D. Condon, J. O'Neil, J. H. Saurs, and Michael Donovan, all Leadville, owners; claim 1500x300 feet; situated in Iowa Gulch, near Bald Mountain, California district, two miles from Leadville; located in 1881; vein a contact, varying in width, and containing lead and iron carbonates in a decomposed gangue; developed by one seventy-five-foot tunnel.

**Graphic Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $4,000,000, in 400,000 shares of $10 each, non-assessable; president, Rush H. Field; treasurer, John J. McRobie; secretary, Andrew McRobie; general manager, Geo. A. Youmans—all Leadville; office corner Harrison Avenue and East Sixth street, Leadville; owns the following claims: Johnnie McDonald, Great West, Jesse James, Manhattan, Red Rose, Lugger, Sea Foam, Silver Cross, Iron Duke, Gold Cup, Sylvanite, and Ned Hanlon, and French Mountain, and Half-moon Tunnel sites, covering 100 acres; situated on French Mountain, at the head of Half-moon Gulch, California district, fifteen miles from Leadville; located in 1880 and 1881; veins probably contacts from two to six feet in width, containing galena in a porphyry and lime gangue; developed by a number of shafts from twenty to fifty feet in depth and 100 feet of tunneling.

**Great O'Sullivan.**—300x1500 feet; situated on California Gulch, one and one-fourth miles from Leadville, California district; located in August, 1880, and in process of patent; owners Martin Sullivan and David Street, both Leadville; vein a contact, varying in width, and containing carbonates carrying both silver and gold, and yielding fairly; developed by one shaft 137 feet deep with a drift from the bottom of shaft thirty-seven feet long, and some other workings, exposing large ore-reserves; equipped with steam hoisting and pumping machinery; output five tons per day.

**Green Mountain Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, W. F. Patrick; vice-president, J. H. Weil; secretary, Wm. Raymond; treasurer, Geo. E. Taylor—all Leadville; office 202 Harrison Avenue, Leadville, Colo.; owns the following claims: Bald Mountain, Grenadier, Mary C., Golden Casket, Colorado Princess, Humboldt, E. C. B., J. Q. S., and Black Diamond, covering fifty acres of surface ground; situated on the west slope of Bald Mountain, California district, three miles from Leadville; located in 1879 and 1880, and patented in 1882; veins all contacts, with crevices from two to eight feet in width, containing gold-bearing quartz and galena, yielding fairly; developed by fifteen shafts from 40 to 200 feet in depth and some other workings.

**Gulois.**—300x1500 feet; situated on Carbonate Hill, California district; located in 1880; owners Jno. J. Jones, Robinson, and Peter Floyd and others, Leadville; vein a contact, varying in width, and containing a deposit of lead carbonates; developed by one forty-foot shaft.

**Hard Cash.**—August R. Meyer, August Rische, Paul Weitzel, and Peter Finnerty, all Leadville, and Clements Perriolat, Chicago, Ill., owners; claim 1500x300 feet; situated on Yankee Hill, California district, one mile from Leadville; located in 1878; vein a contact, varying in width, and containing lead carbonates in a decomposed porphyry gangue, milling, when sorted, from 20 to 100 ounces silver per ton; developed by a shaft 200 feet in depth, with some drifting; improvements—a steam-drill plant and some buildings.

**Harrison Reduction-Works.**—(See St. Louis Smelting and Refining Company.)

**Hartford.**—300x1500 feet; situated on the Little Evans Gulch slope of Prospect Hill, three miles from Leadville, California district; located in 1878, and patented in July, 1880; owners Nathan Cohn and Sam Wright, both Leadville; vein a contact, varying in width, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted fifteen ounces silver and a trace of gold per ton; developed by a tunnel 400 feet long and one shaft fifty six feet deep, with some other workings.

**Hawkins, Long & Derry Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado, August 1, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, R. Cline; secretary and treasurer, H. Mamlock; superintendent, John L. Hawkins; office 104 West Fifth street, Leadville; owns four claims, 1500x 300 feet each, viz.: Coffee, Eugene, Texas, and California Rose; situated on Long and Derry Hill, California district; located in 1877; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed gangue, milling, when sorted, nine per cent lead and from ten to eighty ounces silver per ton; developed by five shafts from 35 to 105 feet in depth, five tunnels from 32 to 170 feet in length, and eighty feet of drifting, with some other workings.

**Hawthorn.**—(See Dyer Mining Company.)

**Head-light Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Thos. George; vice-president, Geo. Edmunds; secretary and treasurer, N. Rollins; office 303 Harrison Avenue, Leadville; owns two adjoining claims on the same vein, 1500x300 feet each, viz.: Head-light No. 1 and No. 2, situated on Arkansas Mountain, three-fourths mile from Alicante Station, Alicante district; located in 1882; vein a fissure, varying in width, and containing quartz and galena; developments—one sixty-foot tunnel and one open cut.

**Henriette Mining Company (The).**—Incorporated under the laws of Great Britain, in 1882; general manager, O. H. Harker, Leadville; owns the Henriette mine, 1500x286 feet; situated on Carbonate Hill, adjoining the Big Pittsburgh on the west, about one mile from Leadville, California district, originally owned by H. A. W. Tabor, J. B. Chaffee, Jr., D. H. Moffatt, J. C. Wilson, James G. Blaine, and Geo. W. Kassler, who still have a majority of the stock; vein a contact with a porphyry hanging and lime foot-wall, varying in thickness, or a deposit of lead carbonates in a decomposed gangue, milling, when sorted, about twenty-five per cent lead and twenty ounces silver per ton; the developments consisting of about 3,300 feet of shafts, inclines, drifts, and cross-cuts, a considerable portion of the recent work having been directed to opening up new territory and showing a number of new ore-faces, as a result of which the property shows greater resources than heretofore, and is prepared for a large production; improvements—ore-houses, shaft-houses, tram-ways, etc., and hoisting and pumping machinery; output $250,000, net, and daily shipments fifty tons.

**Hibernia Silver Mining Company (The).**—Owns the Hibernia, a fractional claim; situated on Fryer Hill, adjoining the Robert E. Lee and Matchless, about one mile from Leadville, California district; vein a horizontal contact, varying in width from six to sixty inches, and containing hard and sand carbonates in a decomposed gangue, milling, when sorted, from $10 to $100 per ton; developments consist of shafts, levels, winzes, etc., and are quite extensive; improvements—steam machinery, ore-houses, shaft-houses, etc.



**Highland Chief Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in August, 1879; capital stock $2,500,000, in 50,000 shares of $50 each, non-assessable; president, J. B. Grant; vice-president, S. H. Foss, both Denver; secretary, Horace Steele, Painesville, Ohio; treasurer, Geo. W. Trimble; assistant secretary, Geo. C. Steele—both Leadville; offices Leadville, Colo.; owns the Highland Chief, Highland Mary, and Robt. Burns, each 1500x300 feet; situated on the summit of Breece Hill, California Mining district, three and one-half miles from Leadville; located in 1878; Highland Mary patented and the others in process of patenting; vein a horizontal contact, with crevices from five to fifty inches, containing lead carbonates in a decomposed porphyry gangue, milling, when sorted, from thirty to fifty per cent lead, and from fifteen to thirty ounces silver per ton; developments—five shafts, two on the Highland Chief 115 and 370 feet in depth, one on the Highland Mary 140 feet, and two on the Robt. Burns 200 and 80 feet, with considerable tunneling, drifting, and other work promising fairly; improvements—steam machinery, motive power supplied by a thirty-four-horse-power engine, with ore and shaft houses, etc.; daily shipments, about fifteen tons.

**Holden.**—W. R. Chadbourne, H. P. Tamm, F. W. Hartzel, and George Holden, all Leadville, owners; claim covers about four acres; situated on Yankee Hill, California district, and in process of patenting; vein a horizontal contact, varying in width and averaging about two feet, containing some silver chlorides in a lime-rock gangue; developed by two shafts 250 feet in depth each.

**Home-stake Mining Company (The).**—Incorporated under the laws of Colorado, November 19, 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, John Sinnott; vice-president, J. D. Lamberson; secretary and treasurer, H. W. Canney; superintendent, E. A. Ramsey; office No. 7 Merchants Block, Leadville; owns six claims 300x1500 feet each, viz.: Britton, Grub-stake, Carbonate of Lead, Goldfinch, Hit-or-Miss, and Monarch; situated on Home-stake Mountain, six miles from the D. & R. G. R. R., at Tennessee Park, Home-stake district; located in 1879; veins probably fissures, from two to ten feet wide, containing quartz and galena, assaying from ten to thirty ounces silver per ton; developments—five shafts and one tunnel, aggregating 145 feet, with some other workings.

**Hoosier Boy.**—Chas. Galvin, Albert Baker, Chas. Johnson, and L. D. Bowker, all Kokomo, owners; claim 1500x300 feet; situated on the west slope of Carbonate Hill, California district, at Leadville; located in 1879; the developments—a shaft sixty-eight feet in depth, and a drift from bottom of shaft forty feet in length, showing more or less lead carbonates, assaying from five to thirty ounces silver per ton, in a decomposed gangue, scattered through the porphyry rock, although contact has not yet been reached.

**Hopkins.**—300x1500 feet; situated on the crest of Mt. Sheridan, nine miles from Leadville, California district, and in process of patent; owners N. Rollins, Joseph Hopkins, P. Brannick, and George Edmunds, all Leadville; vein a contact eight feet thick, containing quartz, galena, and carbonates, in a porphyry gangue, milling, when sorted, thirty-five per cent lead and from twenty to fifty ounces silver per ton; developed by one tunnel 150 feet long, with some other workings.

**Horseshoe.**—300x800 feet; situated on Carbonate Hill, near Leadville, California district; located in June, 1879; owners Chas. I. Thompson, Dan'l Sayer, Henry Cook, and others, Leadville; vein a horizontal contact, varying in width, and containing a deposit of lead carbonates; developments—one sixty-foot incline, with some other workings.

**Horseshoe.**—M. B. Haas, J. L. Hodges, and John Morgan, all Leadville, and G. Rettleman, owners; claim covers eight acres; situated on Iron Hill, California district; located in 1880, and in process of patent; vein a horizontal contact varying in width, and containing lead carbonates, assaying fairly, in a decomposed gangue; developments—one 530-foot shaft, with some other workings.

**Hummala.**—Situated on Long and Derry Hill, within the outcrop of the Long and Derry Group; vein a nearly horizontal contact, varying in width, and containing an ore presumably similar in quality and quantity to that in the Long and Derry, with considerable developments.

**Humboldt and Belgian.**—C. C. Kellogg, M. Sweeney, and others, all Leadville, owners of a one-half interest in both properties; Peter Finnerty, Richard Dillon, and others, owning the other one-half interest in the Belgian (see Belgian and Frenchman); claims cover four acres of surface ground; situated on Iron Hill, California district, two miles from Leadville; located in 1879, and patented in 1882; vein a contact, varying in width, and containing sand carbonates in a decomposed gangue, milling, when sorted, forty per cent lead, and from ten to fifty ounces silver per ton; developed by one 279-foot shaft, with some drifting.

**Hussey Placer.**—Warren Hussey and H. B. Bearce, both Denver, Colo., owners; claim covers 600 acres of surface ground; situated in Willow Gulch, three miles from Twin Lakes, Twin Lakes district; located in 1872; developed by 800 feet of sluicing, 750 feet of hydraulic pipe, seven miles of ditches; worked by one Little Giant, and the gravel is said to prospect fifty cents per cubic yard.

**Imes.**—J. F. Campion, Benjamin Heartz, and A. Z. Terhune, all Leadville, owners; office corner Harrison Avenue and West Sixth street, Leadville, Colo.; claim 1500x300 feet; situated on Iron Hill, adjoining the Silver Chord and Smuggler, California district, two and one-half miles from Leadville, Colo.; located in 1877, and patented in 1881; vein a horizontal contact from four to forty-two inches wide, containing iron and some lead carbonates in a decomposed gangue, milling, when sorted, twenty-five per cent lead and twenty-five ounces silver per ton; developments—one 540-foot shaft, with 270 feet of drifts and winzes, with some other workings, exposing large ore-reserves; improvements—steam machinery, with ore and shaft houses, etc.

**Iowa Gulch Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $6,000,000, in 600,000 shares of $10 each, non-assessable; president, John Ruhl; vice-president, Chas. Graham; secretary, H. B. Hukle; treasurer, John O'Neil—all Philadelphia; superintendent, Robert Bunsen, Leadville; offices 306 Stock Exchange Place, Philadelphia, and 140 West sixth street, Leadville; owns two claims, viz.: the Scooper and Little Minnie; situated on Iron Hill, California district, two and one-half miles from Leadville; located in 1878; vein a horizontal contact, varying in width, and containing carbonates with chlorides and sulphurets in a decomposed gangue, and yielding fairly; developed by five shafts, from 75 to 160 feet in depth, with some drifting and other work; improvements—steam machinery, motive power supplied by a twenty-five-horse-power engine, with the necessary buildings; and the Marietta, 1500x300 feet; situated in Iowa Gulch, two and one-half miles from Leadville; located in 1878; vein a horizontal contact, varying in width, and containing an ore similar to that in the Scooper; developed by one 600-foot tunnel and some drifting.

**Iron Safe Group.**—Comprising five claims, viz.: the Iron Safe, Make-shift, Lock, Pinafore, and Key and Bolt; Charles J. Moore and Nathan Cohn, both Leadville, owners; claims cover forty-six acres; situated on Long and Derry Hill and in Iowa Gulch, California district, six miles from Leadville; located in 1879, and patented in 1881 and 1882; veins probably fissures, varying in width, and containing gold and silver bearing quartz; developed by 350 feet of shafting and tunneling, and promising fairly.



**Iron Silver Mining Company (The).**—Incorporated in 1879; capital stock $10,000,000, in 500,000 shares of $20 each, non-assessable; general manager, Albert Ahrens, Leadville; owns nine claims, viz.: Iron, Iron Hat, Porphyry, Bull's-eye, Lime, Stone, 76, Rock, and Dome, situated mainly on Iron Hill, but crossing California Gulch and extending onto Rock Hill, opposite, about three miles east of Leadville, California district; vein a contact, with lime and porphyry walls, varying in width from one to forty feet, and dipping to the east about 17°; ore—iron and lead carbonates and oxides in a decomposed porphyry gangue, milling, when sorted, from twenty to twenty-five per cent lead and from fifteen to twenty ounces silver per ton, or a net profit to the Company of from $10 to $15 per ton, after deducting the cost of mining, hauling, and treating; developments—over 40,000 feet of tunnels, inclines, shafts, winzes, and drifts, showing immense ore-reserves; surface improvements—three complete plants of hoisting and pumping machinery, shaft and ore houses, saw-mill, offices, and dwelling-houses; monthly shipments during present year about 8,500 tons; number of dividends paid, eleven, of $100,000 each, or a total of $1,100,000; the mines of the Company having been largely and steadily productive, and although the grade is not as high as some others in the district, yet the amount produced yields a large profit.

**Jerald Jourdan Mining Company (The).**—Incorporated under the laws of New York, in January, 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Jerald Jourdan, Brooklyn, N. Y.; general manager, F. W. Owers, Buena Vista, Colo.; offices Brooklyn, N. Y., and Buena Vista, Colo.; owns the Oscar, George H., Cute, and Mike placers, covering 750 acres of surface ground; situated at Leadville, California district; located in 1880; which the Company intends developing by shafts, to reach the contact and strike carbonates.

**Jim Fisk Group.**—Comprising the Jim Fisk, Eureka, and Silver Bank lodes; Jeremiah A. Greenlaw, Park City, owner; claims 1500x300 feet each; situated on Lake Creek, Lake Creek district, four miles from Twin Lakes; located in 1881; veins probably fissures, with crevices from four to seven feet wide, and pay streaks about eighteen inches, containing gold and silver bearing quartz, assaying five per cent lead, two and one-half ounces gold, and 100 ounces silver per ton; developed by three tunnels from twenty-five to forty feet in length.

**John-John Group.**—Comprising the John-John, Viola, and Georgia lodes; John W. Greenlaw, Gorham, W. H. and John M. Warmell, Denver, owners; claims, 1500x300 feet each; situated in Bird's-eye Gulch, California district, six miles from Leadville, Colo.; veins probably fissures, with crevices three feet wide, containing gold and silver bearing quartz, assaying $50 per ton; developed by three shafts thirty feet deep each.

**Jolly Boy.**—Eight acres; situated on Carbonate Hill, three-fourths mile from Leadville, California district; located in 1880; owners W. B. Daniels, W. G. Fisher, Wolfe Londoner, and S. T. Armstrong, all Denver, Joel W. Smith, Leadville, and others; vein a horizontal contact, varying in width, and containing deposit of lead carbonates in a decomposed gangue, similar in character to the mineral in the Morning and Evening Star mines, milling, when sorted, from $50 to $150 per ton; developed by one shaft 160 feet deep, with some other workings.

**Judge Pendery.**—(See Glass-Pendery Mining Company.)

**Kaiser.**—Situated in Iowa Gulch, adjoining the First National, California district; vein a horizontal contact, varying in width, and containing an ore similar in quantity and quality to that in the First National, with considerable developments.

**Kenosha.**—Situated on Long and Derry Hill, within the outcrop of the Long and Derry Group; vein a contact, varying in width, and presumably containing an ore similar in quality and quantity to that in the Long and Derry, with considerable developments.

**Keystone.**—Daniel Sayer, C. I. Thompson, and A. S. Blake, all Leadville, owners; claim 1500x300 feet; situated in California Gulch, near the Long and Derry mine, California district, seven miles from Leadville; located in 1878; vein a horizontal contact, with a crevice from six to thirty-two inches wide, containing galena and lead carbonates, in a porphyry gangue; developed by a tunnel ninety feet in length, a shaft twenty feet in depth, and a drift ninety feet in length.

**King William and Buchanan.**—Two claims, 300x1500 feet each; situated on Dyer Mountain, eight miles from Leadville, California district; owners Dr. Jno. A. Hall, Fred. Stuthman, R. A. Eccles, E. Haverstraw, and Henry Seltzer, all Leadville; vein a contact, varying in width, and containing galena in a quartz gangue, milling, when sorted, from ten to forty ounces silver per ton; developments—one tunnel 200 feet long and one forty-foot shaft.

**Koehler Diamond.**—300x1500 feet; situated on Koehler and Ames Flat, three-fourths mile south-west of Tennessee Pass, California district; located in January, 1883; owners M. J. Elbert, Lake City, and J. W. Koehler, Cooper Post-office, Summit County; vein a horizontal contact, appearing six feet below the surface and at least fifty-five feet thick, containing twelve feet of hematite iron, assaying fifty per cent iron, from eleven to twenty-one ounces silver, and from one-half to one ounce gold per ton; developed by a shaft sixty-five feet deep.

**Lake County.**—Situated on Long and Derry Hill, within the outcrop of the Long and Derry Group, about four and one-half miles from Leadville; vein a nearly horizontal contact, and presumably containing an ore similar in quality and quantity to that in the Long and Derry, with considerable developments.

**La Plata Mining and Smelting Company (The).**—Incorporated under the laws of New York; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Nathaniel Wetherell; vice-president, Theo. E. Berdell; second vice-president, Harry Allen; secretary, A. Landon—all New York City; general manager and third vice-president, M. E. Smith, Leadville; office Leadville; owns one claim, viz., the Oro La Plata, 300x1500 feet; situated in California Gulch, about two miles from Leadville; located in 1877, and patented; vein a contact varying in width, containing a carbonate ore in a decomposed porphyry gangue, milling, when sorted, twenty-five per cent lead and from ten to fifteen ounces silver per ton; developed by 150 feet of shafts and tunnels, with considerable drifts and other workings; daily shipments about twenty-five tons.

Also owns a smelting-works, situated in California Gulch, at Leadville, comprising a smelting-building, containing six blast and one reverberatory furnaces; motive power supplied by two 150-horse-power engines; capacity 175 tons per day (twenty-four hours) and an average of 1,000 tons per month in 1881-82.



**Last Chance.**—300x1500 feet; situated on the crest of Long and Derry Hill, four and one-half miles from Leadville, California district; owners J. L. Jerome and Chester S. Morey, both Denver, and Walter J. Kelley, New York City; ore—lead carbonates, appearing in pockets distributed irregularly throughout the contact of the porphyry and lime, assaying from five to thirty ounces silver per ton; developments—one tunnel 400 feet long and three shafts 110, 45, and 12 feet deep.

**Last Chance.**—300x1500 feet; situated at the head of Stray Horse Gulch, California district, patented in August, 1880; owners August R. Meyer, Kansas City, Mo., Jno. L. McMurtrie and August Riche, both Denver, Howard C. Chapin and others, Leadville; vein a contact varying in width, containing a deposit of lead carbonates in a decomposed gangue; developments—one shaft 200 feet deep, with some other workings; shaft-house on property.

**Lawrence Mining and Smelting Company (The).**—Incorporated under the laws of Colorado in September, 1879; capital stock $2,000,000, in 100,000 shares of $20 each, non-assessable; president, P. B. Plumb, Emporia, Kas.; vice-president, S. O. Thatcher, Lawrence, Kas.; secretary and superintendent, O. F. Myers, Leadville; treasurer, Frank Brooks, Kansas City, Mo.; offices 201 East Seventh street, Leadville; owns the Arizona placer, 160 acres, and the Lawrence Group, eight claims, covering forty acres; situated on Bald Mountain and Printer Boy Hill, California district, three miles from Leadville; patented in 1881 and 1882; vein a contact, with a crevice from four to eight feet wide, containing carbonates, carrying gold and silver in a decomposed gangue, milling, when sorted, forty ounces silver per ton; developed by four tunnels aggregating 700 feet and six shafts 100 feet deep each, with some other workings.

**Leadville Consolidated Mining Company (The).**—Owns the Carbonate and a number of other claims; situated near the summit of Carbonate Hill, California district, about one mile from Leadville, and all patented; vein a contact, varying in width from one to six feet, and containing lead carbonates with some chlorides, in a decomposed gangue, milling, when sorted, from twenty-five to fifty per cent lead and from 25 to 200 ounces silver per ton; developments—one main incline 825 feet long with drifts and other workings, aggregating 9,000 feet, showing large ore-reserves; improvements—superior steam hoisting and pumping machinery, with the necessary motive power, shaft-houses, ore-houses, and other buildings, railway one and one-half miles in length, most of which is elevated—making it one of the most extensively improved and largest producing properties in the district.

**Leadville Gold and Silver Mill Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, R. S. Middleton; vice-president, E. C. Benedict; treasurer, R. P. Flower—all New York; general manager, Henry S. Kearney, Leadville, Colo.; office Leadville; owns a stamp-mill; established in 1880, and situated in California Gulch, one mile from Leadville; consisting of a number of buildings with iron roofing, with the yards, etc., covering 15,118 square feet, and containing two Blake Rock-breakers, twenty 850-pound Stamps arranged in four batteries of five Stamps each, with a capacity of from 40 to 100 tons per day (twenty-four hours), eighteen settling-tanks, ten amalgamating-pans with steam bottoms, and five settlers, motive power being supplied by one 225-horse-power engine, with ample boilers.

**Lee Basin Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1882; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Edward D. Cope; secretary, Geo. L.

Smedley; treasurer, Chas. Eneu Johnson—all Philadelphia; general manager, Robert Bunsen, Leadville; offices 140 West Sixth street, Leadville, Colo., and Exchange Building, Philadelphia; owns a half interest in the Denver City, Shamus O'Brien, and Quadrilateral lodes. (See Denver City Consolidated Mining Company.)

**Legal Tender Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1877; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, A. A. Smith; vice-president, J. M. Maxwell; secretary and treasurer, C. C. Kellogg—all Leadville; office 121 East Fourth street, Leadville; owns the following claims: Little Vinnie, Carleton, Forest Queen, Florence, Golden Eagle, Edith, and Ophelia, covering about fifty acres; situated on Breece Hill, California district; located in 1878 and 1879; Little Vinnie, Golden Eagle, and Edith patented in 1882, and the others in process of patent; vein a horizontal contact, varying in width, and containing carbonates with chlorides and gold-bearing quartz, yielding fairly; developed by seven shafts from 120 to 175 feet in depth, with some drifting.

**Leopard Mining Company (The).**—Incorporated under the laws of Colorado, January 10, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, N. F. Cleary; secretary and treasurer, R. St. J. Cleary; superintendent, Chas. Hughes; office 309 Harrison Avenue, Leadville; owns the Leopard lode, 300x1500 feet; situated on Printer Boy Hill, at the head of California Gulch, California district; located in July, 1879, and in process of patent; vein probably a fissure, in a porphyry formation twelve feet wide at a depth of 192 feet, containing decomposed quartz carrying iron pyrites said to be rich in gold; developed by one shaft 192 feet deep and two tunnels seventy-four and fifty-nine feet long, respectively, with some other workings.

**Little Bertha.**—L. K. Thacher, Kansas City, Mo., and S. B. Warren, Emporia, Kansas, owners; claim 1500x300 feet; situated on Breece Hill, California district, three miles from Leadville; located in 1879, and in process of patent; vein a horizontal contact, varying in width, and containing carbonates carrying gold and silver; developed by a shaft seventy-five feet in depth and a tunnel forty feet in length.

**Little Celie Group.**—Six claims, 300x1500 feet each; viz.: Little Celie, Little Jewess, Little Aggie, Little Louisa, Manhattan, and Bull of the Woods; situated in Elk Horn Gulch, three-fourths of a mile from Bird's-eye Station, California district; located in 1879; owners P. McCauley and J. D. Ward, both Leadville; vein a contact, varying in width, and containing a carbonate deposit carrying iron and silver; developments—one discovery shaft or tunnel on each claim aggregating 500 feet in length and depth.

**Little Chief.**—1500x300 feet; situated on Fryer Hill, California district, about one mile from Leadville; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed gangue, milling, when sorted, from ten to thirty per cent lead and from 20 to 100 ounces silver per ton; developments—shafts, levels, and winzes aggregating several thousand feet, one of the levels running from the Daly shaft passing through a large porphyry dike; improvements—steam machinery, ore-houses, shaft-houses, etc.; output for 1881 is said to have been over $100,000, but of late the property has been idle.

**Little Chippewa.**—(See Chippewa Consolidated Mining Company.)



**Little Delaware Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Lou C. Leonard; secretary, C. W. Waite; treasurer, L. J. Smith; general manager P. J. Cunningham; superintendent, James McKeon—all Leadville; office 210 Harrison Avenue, Leadville; owns the Little Delaware, Justice, Kangaroo, Smasher, Letter Kenny, and McKeon, covering thirty-nine acres of surface ground, twenty-seven of which is patented; situated in California Gulch, California district, one mile from Leadville; located in 1881; vein a horizontal contact, with crevices from two to six feet in thickness, containing lead carbonates; developed by seven shafts from 50 to 200 feet in depth, with some other workings.

**Little Ellen Group.**—(See American Mining and Smelting Company.

**Little Hattie.**—(See Excelsior Consolidated Gold and Silver Mining Company.)

**Little Hope.**—300x1500 feet; situated in California Gulch, two and one-half miles from Leadville, California district; located in January, 1882; owners J. W. Jacque, T. Ryan, J. Mahoney, T. W. Leonard, P. Healey, Henry Kelley, and Jas. Shire, all Leadville; vein a contact, varying in width, and containing galena in a quartz gangue; developed by a shaft 165 feet deep, with some other workings.

**Little Julia and Jim Fisk.**—Raphael Marcott, Joseph Fraser, and James R. Milburn, all Leadville, owners; claims 1500x300 feet each; situated in Iowa Gulch, California district; located in 1880, and patented in 1881; vein a horizontal contact, with a pay streak five inches wide, containing galena and carbonates, assaying twelve per cent lead, one ounce gold, and thirty ounces silver per ton, in a porphyry gangue; developed by three shafts, 40, 60, and 215 feet in depth, and some other workings; operated by steam machinery, motive power supplied by a fifteen-horse-power engine.

**Little Madge Group.**—Four claims, 300x1500 feet each, viz.: Little Madge, Willoughby, Hidden Treasure, and Warren; situated in Colorado Gulch, five miles from Leadville, California district; located in 1881; owners A. W. and C. Stone and J. F. Bowman, all Leadville; veins probably fissures, from one to three feet wide, containing lead carbonates in a decomposed gangue-matter; developed by two shafts fifty and forty feet deep, respectively, two tunnels 350 and 100 feet long, respectively, and cross-cuts aggregating 100 feet in length, with some other workings.

**Little May.**—F. A. Buse, Taylor City, and G. G. Clemner, Leadville, owners; claim 1500x300 feet; situated in Iowa Gulch, California district, six miles from Leadville; relocated in 1882; vein a contact, with a pay streak ten inches wide, containing galena, with some brittle silver, assaying from 47 to 1,100 ounces silver per ton, in a porphyry gangue; developed by a shaft twenty feet in depth.

**Little Missouri.**—Situated in California Gulch, west of the A. Y. mine, California district; developments—one shaft 170 feet deep, with two inclines, one running north and the other south, the latter striking a body of mineral supposed to be the same as that found in the A. Y.

**Little Piney Gold and Silver Mining Company.**—Incorporated under the laws of Colorado, in May, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Austin Lathrop,

Jr.; vice-president, C. J. Fox; secretary, treasurer, and manager, E. P. Graves —all Corning, N. Y.; assistant manager, W. S. Duval, Leadville; office 113 West, Fifth street, Leadville; owns twenty-one lode claims, viz.: Snow-shoe, General Crane, Mountain-lion, Brightley, F. W. F., Corfield, Burchinell, General Arthur, Alpha, Omega, Peerless, Hunter, Ellen E., Dudley, Fay, Piney, White Rabbit, Elmira, Francis C., Moore, and Schlosser, 300x1500 feet each; vein a horizontal contact, varying in width, and containing a carbonate deposit carrying both silver and gold; developments consisting of two year's assessment work on each claim, one sixty-foot shaft, one sixty-foot drift from bottom of shaft, and fifty feet of cross-drifts; and four placers, viz., Home-stake, Rosedale, Graves, and E. G. Fay, covering 320 acres; developments consisting of 900 feet of fluming, with eight sluice-boxes, worked by one four-inch Giant, the water being brought across the divide from the head of the Eagle River, and from Tennessee Gulch; all this property being situated at Tennessee Pass, ten miles from Leadville, California district; located in 1880.

**Little Pittsburgh Consolidated Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $20,000,000, in 200,000 shares of $100 each, non-assessable; president, W. H. Barnum; vice-president, David S. Draper; secretary, H. H. Kirkham; managing director, F. E. Canda; manager, E. C. Gilman; offices 115 Broadway, New York, and at head of Seventh street, Leadville; owns the Little Pittsburgh, New Discovery, Dives, Union, and Winnemuck, five claims, covering a little over twenty acres; situated on Fryer Hill, about one-half mile from Leadville, California district; located in 1878, and the first three patented in 1879; vein a contact, varying in width, containing lead carbonates in a decomposed gangue, milling, when sorted, from $20 to $250 per ton in silver and lead; developments—2,000 feet of shafting and considerable stoping, with other workings, from which it appears that there is a separate ore chute from the main one, extending on the south side of the Hill, and being a continuation of that found in the Robert E. Lee, Matchless, and others; improvements—steam hoisting and pumping machinery, ore-shaft and dwelling-houses, offices, etc.; dividends paid $1,050,000.

**Little Silver Mining Company (The).**—(Unincorporated); composed of Henry Wolcott, David H. Moffat, Edward Eddy, W. H. James, Hugh Butler, and Chas. W. Wright, all Denver, Sidney Webster, New York City, and others; owns the Little Sliver, covering five and one-half acres; situated on Fryer Hill, adjoining the Robert E. Lee mine, California district, about one mile from Leadville; located in 1879, and patented in 1881; vein a contact, from one to three feet wide, containing lead carbonates in a decomposed gangue, milling, when sorted, from 50 to 250 ounces silver per ton; developed by a shaft 280 feet in depth, with some other workings, and promising fairly; improvements—one Cornish Pump, with the necessary motive power, and other machinery, shaft-houses, etc.

**Little Stella.**—Daniel Sayer and C. I. Thompson, both Leadville, and the estate of A. P. Hereford, Washington, D. C., owners; claim 1500x300 feet; situated on Yankee Hill, California district, one and one-half miles from Leadville; located in 1878, and in process of patent; vein a horizontal contact, with a crevice from four to thirty inches wide, containing hard and sand carbonates, assaying forty per cent lead and fourteen ounces silver per ton, in a decomposed gangue; developed by a shaft forty-five feet in depth, a winze eighty-three feet in depth, and a drift thirty-four feet long.

**Little Vinnie.**—(See Legal Tender Consolidated Mining Company.)

**Long and Derry Group.**—Consisting of eight claims, viz.: Faint Hope, Dora, Porphyry, Platener, Strip, Triangle, Mary Jane, and Mary Ann; situated on Long and Derry Hill, about four and one-half miles from Leadville, California district; vein a nearly horizontal contact, with porphyry and lime walls, varying in width from two to nine feet, pay streak from six to sixty inches, containing lead carbonates in a decomposed porphyry gangue, milling, when sorted, from $25 to $200 per ton; developments on the Faint Hope, the extreme western location of the group, three shafts, with a large amount of drifts, winzes, stopes, etc., on the Dora three shafts, one tunnel, with considerable drifting, etc., and on the others by shafts of considerable depth, showing large ore-reserves; improvements—steam hoisting and pumping machinery, ore-houses, shaft-houses, etc.; property has been a large producer.



**Louisiana.**—Chas. E. Wyman and others, Leadville, owners; claim 1200x300 feet; situated in South Evans Gulch, California district, five miles from Ledville; located in 1878, and patented in 1882; vein a horizontal contact, with a crevice from two to twenty inches wide, containing lead carbonates, assaying from 50 to 100 ounces silver per ton; developed by two shafts fifty and eighty feet in depth and a tunnel forty feet in length.

**Loveland.**—(See Consolidated Yankee and Breece Hill Mining Company.)

**Luella.**—300x1500 feet; situated at the foot of Printer Boy Hill, California district; located in November, 1878; owners Sam'l Whitaker, Chas. I. Thompson, and Daniel Sayer, all Leadville; vein probably a fissure, containing gold-bearing quartz; developed by one forty-foot shaft and one fifty-foot tunnel.

**Mahaska.**—G. W. Hull and Joseph Heston, both Leadville, owners; claim 1500x300 feet; situated at the head of Lake Creek, near Mountain Boy Park, Lake Creek district, thirty miles from Leadville; vein probably a fissure, varying in width, and containing galena, assaying from thirty-five to sixty-four ounces silver per ton, in a quartz gangue; developed by a shaft twenty feet in depth and a tunnel forty feet in length.

**Mammoth Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, B. F. Stickley; secretary and treasurer, W. R. Hall—both Leadville, Colo; office 107 East Fourth street, Leadville; owns the Mammoth and six other claims, 1500x300 feet each; situated near the base of Bald Mountain, California district, and patented in 1882; vein a contact from six to twelve inches wide, containing carbonates and iron, assaying thirty ounces silver per ton; developed by eight shafts from 100 to 240 feet in depth, with some other workings.

**Marian Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, A. D. Breed, New York; secretary, John W. Newton, Leadville; owns the Cyclops, Devlin, and R. A. M. claims, covering twenty-six acres of surface ground; situated on the northeast slope of Carbonate Hill, California district, about one mile from Leadville; located in 1879, and patented in 1882; vein a contact, underlying the entire property, and varying in thickness from one-half to two feet, as shown by a shaft 245 feet deep, and some drifting; the property having been almost constantly worked since its first discovery, and although not always productive, has turned out some very valuable ore; the latter consisting mainly of lead carbonates and galena in a decomposed gangue, milling, when sorted, about thirty-five per cent lead and thirty-five ounces silver per ton; improvements—hoisting machinery, motive power supplied by a fifteen-horse-power engine, and some buildings.

**Marietta.**—(See Iowa Gulch Mining Company.)

**Matchless.**—H. A. W. Tabor, Denver, owner; manager, Lou C. Leonard, Leadville; claims cover $4\frac{42}{100}$ acres of surface ground; situated on Fryer Hill, adjoining the Robert E. Lee, California district; located in 1878, and patented in 1879; vein a contact, with a crevice from two to ten feet in width between the porphyry and the lime, the ore contained therein consisting of hard and sand carbonates, in a decomposed gangue, milling, when sorted, from $20 to $600 per ton; developments—two working shafts 148 and 165 feet in depth, with 3,500 feet of drifts, stopes, and other workings; a drift and cross-cut running from one of the shafts at a depth of 150 feet, and striking an ore which, although not showing any chloride, has run as high as 600 ounces silver per ton; besides which there appears in the same drift large quantities of iron, with some hard carbonates, and a drift connects the other shaft with the Robert E. Lee workings, exposing a fine and high-grade ore, while from the same shaft another drift extends from a higher level to the line of the Dolphin, showing large amounts of ore, yielding from 20 to 100 ounces silver per ton; improvements—steam hoisting and pumping machinery, ore-houses, shaft-houses, etc.; output $1,900,000.

**Mather and Brooks.**—Stamp-mill building 40x40 feet and one-story high, containing ten Stamps, with an engine-room attached 16x30 feet, containing a forty-horse-power engine and boiler; situated at Leadville; mill erected in August, 1882, and owned by Jno. H. and S. F. Mather, Frank and Van H. Brooks, Geo. S. Miller and O. C. Palmer; office 602 Harrison Avenue, Leadville.

**McPherson.**—300x1500 feet; situated at the head of Big Evans Gulch, six miles from Leadville, California district; located in 1879; owners R. H. Drennon, Kansas City, and James T. McHugh, Silverton; vein a contact, varying in width, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, ten per cent lead and twenty ounces silver per ton; developments—one twenty-foot open cut, one seventy-one-foot shaft, and one sixty-foot incline.

**Memphis.**—Owned by Wm. Moore, Denver, J. J. Devlin and C. L. Pelton, both Leadville; claim 1500x150 feet; situated on Printer Boy Hill, California district; located in 1881; vein probably a fissure, one foot in thickness, containing some gold-bearing quartz; developed by two shafts twenty feet deep each.

**Metropolitan.**—300x1500 feet; situated on the north slope of Mt. Zion, five miles from Leadville, California district; located in 1879; owners E. C. Van Pelt, T. J. Laws, and others, Leadville; vein probably a horizontal contact, varying in width, containing porphyry and chlorides; developments—one seventy-eight-foot shaft.

**Meyer Mining Company (The).**—Incorporated under the laws of Missouri, in 1877; capital stock $220,000, in 2,200 shares of $100 each, non-assessable; president, G. W. Chadbourne; vice-president, Edwin Harrison; secretary and treasurer, G. H. Loker—all St. Louis, Mo.; office at Harrison Reduction-works, Leadville; owns the Ætna mine, covering ten and one-third acres; situated on Carbonate Hill, adjoining the May Queen, California district, about one-half mile from Leadville; located in 1877, and patented June 12, 1880; vein a horizontal contact, varying in width, and containing lead and iron carbonates in a decomposed gangue, milling, when sorted, from twenty to thirty per cent lead and from fifteen to fifty ounces silver per ton; developed by fifteen shafts from 15 to 265 feet in depth, with considerable drifting, winzes, etc., showing large ore-reserves; the work having of late been directed more to develop the property than to increasing the production, striking in one place a body of iron and ochre; improvements—steam hoisting and pumping machinery, with the necessary motive power, ore-houses, shaft-houses, etc.



**Mike and Starr Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, C. H. Tompkins; vice-president, John McGinnis; secretary and treasurer, Harris K. Smith—all New York; manager, Tingley S. Wood; agent, R. E. Goodell—both Leadville; offices 15 Courtland street, New York, and 224 Harrison Avenue, Leadville, Colo.; owns the Mike and Starr Group, comprising five claims, viz.: the Mike, Starr, Goodell, Gardner, and Tankerstown, covering ten and one-third acres each; situated between Iron and Breece Hills, two and one-half miles from Leadville, California district; located in 1877, and patented in 1880 and 1881; vein a contact (nearly horizontal), dipping a little to the south-east, and varying in width from ten to thirty feet, and containing mainly oxides, sulphides, and carbonates, somewhat refractory, but assisted by a percentage of copper and a considerable amount of gold with a decomposed gangue, milling, when sorted, from five to fifteen per cent copper, from one-twentieth to one-half ounce gold, and from twenty to 100 ounces silver per ton; the richest ore, however, appearing in the form of pockets, seams, and disconnected chests, scattered irregularly through a mass of pale, low-grade pyritous matter carrying arsenic; developments—one main shaft 474 feet in depth—from the bottom of which a three-inch drill was sunk forty feet, penetrating silicious limestone and quartzite—with levels radiating from the shaft, and considerable winzes, stoping, and other workings; improvements—one double-plunger pump, with a forty-horse-power engine, and hoisting machinery, with a twenty-five-horse-power engine, ore-houses, shaft-houses, etc.; output per month from 200 to 400 tons, the property having been a large producer for the past year.

**Miner Boy.**—Situated on Breece Hill, California district; vein a horizontal contact, varying in width, and containing a sulphuret ore, valuable as a matting ore in smelting, as shown by a number of shafts of considerable depth, and some other workings; improvements—steam machinery, ore-houses, shaft-houses, etc.

**Minonk.**—300x1500 feet; situated in Iowa Gulch, five miles from Leadville, California district; located in May, 1879; owners W. R. Corbett and C. Bowden, both Robinson, J. Curtis, Leadville, and —— Myers, Boston; vein probably a contact, varying in width, and containing a deposit of oxidized iron and galena, assaying from ten to twelve and one-half ounces silver per ton, in a lime-rock gangue; developed by one shaft 109 feet deep and one tunnel twenty feet long.

**Mishawka Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Jeremiah A. Greenlaw, Park City; vice-president, Charles H. Perkins; secretary, H. F. Smith; treasurer, Valentine Baker; general manager, H. R. Calkins—all Leadville; office Leadville; owns the Mishawka Group, comprising eleven claims, covering ten and one-third acres each; situated at the head of Union Gulch, California Mining district, six miles from Leadville; located in 1879; veins all contacts, varying in width, and containing galena and carbonates in a lime-rock gangue; developed by four shafts from 45 to 100 feet in depth and three tunnels from 125 to 145 feet in length, with some other workings.

**Missouri.**—See Norman Borden.)

**Mollie Klefns Tuunel Site.**—W. B. Haas and Henry Klefus, both Leadville, owners; claim 3000x6 feet; situated in Colorado Gulch, Independence district, six miles from Leadville; located in 1879; on which a tunnel is driven 360 feet in length, cutting a number of veins, varying in width, containing galena in a lime-rock gangue.

**Monitor Group.**—Owned by D. Simon & Co., Chicago, and leased to V. A. Pageot, Rush Field, and others, until September 1, 1883; group comprises three claims, viz.: the Monitor, Ehrie, and Long View, 1500x300 feet each; situated on Mount Sheridan, California district, seven miles from Leadville; located from 1878 to 1881; vein a horizontal contact, with a crevice from two to four feet wide, and a pay streak from nine to twelve inches, containing galena and copper in a lime-rock gangue, milling, when sorted, thirty-five per cent lead and forty ounces silver per ton; developed by four tunnels from 30 to 160 feet in length, with some drifting; output 100 tons.

**Monte Christo.**—(See Agassiz Consolidated Mining Company.)

**Monte Christo.**—M. B. Haas, John Riling, John Kirch, H. W. Diming, and J. C. Fuller, all Leadville, and Samantha B. Thomas, Wichita, Kansas, owners; claim covers eight acres; situated in South Evans Gulch, California district, and patented; vein a contact, varying in width, and containing a deposit of lead carbonates, assaying thirty per cent lead and twenty ounces silver per ton, in a decomposed gangue; developed by a shaft 136 feet in depth, with some other workings.

**Morning Star Consolidated Mining Company (The).**—Incorporated under the laws of New York, in September, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, W. B. Dickerman; vice-president, Wm. H. Philips; secretary and treasurer, William Adams; general manager, W. S. Ward; offices Room 19 No. 2 Wall street, New York, and at the mines, Leadville; owns three claims, viz.: Morning Star, Waterloo, and Bismarck, covering twenty-seven acres; situated on Carbonate Hill, California district; located in 1877, and patented; vein a contact, varying in width from six inches to twenty feet, and containing lead carbonates in a decomposed gangue, milling, when sorted, from thirty-five to forty-five per cent lead and from twenty to twenty-five ounces silver per ton; developments—six shafts from 150 to 430 feet in depth, with a large amount of drifts, winzes, and other workings; improvements—six hoisting and pumping engines, six shaft-houses, saw-mill, blacksmith-shop, assay-office, etc.; output from September 1, 1881, to July 1, 1882, 33,013,585 pounds of ore; dividends paid—fourteen of $25,000 each, prior to August, 1882.

**Mountain Lark.**—M. B. Haas, Henry Klefus, and others, all Leadville, owners; claim 1500x300 feet; situated in Colorado Gulch, Independence district, six miles from Leadville; located in 1879; vein a horizontal contact, from eight to twenty-four inches wide, containing galena and carbonates in a porphyry gangue; developed by a shaft forty feet in depth.

**Mountain Lion.**—300x1500 feet; situated on Bald Mountain, three miles from Leadville, California district; located in 1879, and patented in 1882; owners Geo. S. Miller, Wm. Thompson, Thomas Rich, and —— Fraser, all Leadville; developed by one shaft 167 feet deep, showing a contact vein, varying in width, and containing carbonates and free-milling gold quartz.

**Mountaineer.**—McMillen Bros. and Peter Luddy, all Leadville, owners; claim 1500x300 feet; situated in Iowa Gulch, California district; located in 1880; vein a horizontal contact, varying in width, and containing carbonates in a decomposed gangue; developed by a shaft fifty feet in depth.



**Nellie S.**—Peter Breen and others, Leadville, owners; claim 1500x300 feet; situated on Printer Boy Hill, California district, two and one-half miles from Leadville; vein a horizontal contact, varying in width from one to three feet, and containing lead and copper carbonates in talc gangue-matter very rich in gold, assaying from $1,000 to $20,000 in gold per ton; developed by a number of drifts striking the mineral body forty-five feet from the surface.

**Nestor and Pickwick.**—Frank Brooks and W. S. Rice, both Kansas City, Mo., Van H. Brooks, Leadville, and S. C. Brooks, Cleveland, Ohio, owners; claims cover nine acres of surface ground; situated on Printer Boy Hill, California district, two miles from Leadville; located in 1879, and Nestor patented in 1881 and Pickwick in process of patent; vein a contact, varying in width, and containing a deposit of carbonates and galena in a decomposed gangue, milling, when sorted, $40 per ton; developed by a shaft 250 feet in depth and two drifts sixty-five and seventy feet in length.

**Nettie B.**—F. A. Buse, Taylor City, G. G. Clemmer and J. S. D. Manville, both Leadville, owners; claim 1500x300 feet; situated in Iowa Gulch, California district, six miles from Leadville; located in 1878; vein a horizontal contact, with a crevice from six to twenty-four inches, containing galena and iron, assaying from fifteen to forty ounces silver per ton; developed by a tunnel 220 feet in length, with some other workings.

**Nevada.**—300x1500 feet; situated in South Evans Gulch, three miles from Leadville, California district; located in 1878, and patented in 1880; owner August Riche, Denver; vein a contact, varying in width, and containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, forty per cent lead, sixteen ounces silver, and three-fourths ounce gold per ton; developed by one 400-foot tunnel and one shaft 150 feet deep, with some other workings; operated by a ten-horse-power engine; output three tons per day.

**New Telegraph Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado in March, 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, J. P. Vastine; vice-president, L. S. Holden; secretary, E. J. McKitrick; treasurer, L. W. Austermell—all St. Louis; superintendent, J. H. Bohn; office 11 North Seventh street, St. Louis, and also Leadville; owns twelve lode claims, covering ninety-six acres, viz.: Lockport, Joaquin, Olive branch, Little Triune, etc., containing one gold-bearing quartz vein, and in the others the mineral is carbonates of iron, carrying silver; developments—250 feet of tunneling; and two placers, viz., Little English and Percivan, covering 200 acres; developments—100 feet of ditching; all situated in Little English Gulch, and on the west side of Arkansas Mountain, two miles from the D. & R. G. track, at the mouth of Big English Gulch, California district; located in 1880.

**New York and Colorado Mining, Development, and Prospecting Company (The).**—Incorporated under the laws of Colorado in March, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, A. P. Curry; vice-president, J. L. Pendery; secretary and assistant treasurer, F. R. Miller; treasurer, James Streeter; superintendent, Wm. Elliott Lee—all Leadville; office 201 East Seventh street, Leadville, Colo.; owns the Empire and Eureka, 1500x300 feet each; situated in Empire Gulch, California district, four miles from Leadville; located in 1879, and patented in 1881; vein a horizontal contact, with a crevice from ten to thirty feet in thickness, containing some lead carbonates, which assay from twenty to fifty ounces silver per ton; developed by a shaft twenty-five feet in depth; the Theresa, Eugenia, Amelia, Little Lizzie, Little Ida, 1500x300 feet each; situated on Mt. Zion, California district, four miles from Leadville, and in process of patent; vein a contact varying in width, and containing galena

and carbonates of lead, assaying from twenty to thirty ounces silver per ton; developed by an incline 300 feet in length, with some drifting; and owns the Union and Empire placers, covering 500 acres of surface ground; situated in the Arkansas Valley, California district, four miles from Leadville; located in 1880, and are in process of patent; developed by inclines and shafts aggregating 150 feet.

**Nigger Infant.**—M. B. Haas, C. A. Manners, J. W. Crancer, M. S. Thomas, P. H. Moore, John T. Peters, and G. C. Steele, all Leadville, owners; claim covers seven acres; situated on Breece Hill, California district, two miles from Leadville; located in 1878, and patented in 1881; vein a horizontal contact varying in width, and containing carbonates in a decomposed gangue, milling, when sorted, twenty-four per cent lead, two and one-tenth ounces gold, and thirty ounces silver per ton; developed by a shaft 122 feet in depth, with some other workings.

**Nisi Prius, Leadville, and Nisi Prius Extension.**—Three claims, 300x1500 feet each; situated in Iowa Gulch, two miles from Leadville, California district; located in 1878, and patented in 1881; owners J. B. Grant and William H. James, both Denver, and Chas. L. Hall and Geo. E. Pease, both Leadville; vein a horizontal contact, varying in width, and containing a deposit of manganese and iron, showing stringers of lead carbonates in a decomposed gangue, milling, when sorted, from five to twenty-five per cent lead and from 50 to 200 ounces silver per ton; developments—one main working incline 350 feet long, with 2,000 feet of drifts and tunnels; improvements—shaft, engine, and ore house, and a forty-four-horse-power pumping and hoisting engine.

**Nora.**—M. B. Haas, Leadville, Colo., owner; claim 1500x300 feet; situated in Colorado Gulch, Independence district, six miles from Leadville; located in 1880; vein a horozontal contact, from six inches to three feet in width, containing galena and carbonates; developed by a tunnel 130 feet in length, with some other workings.

**Norman Borden.**—(Or Missouri); eight acres; situated on Iron Hill, near Leadville, California district,; located in October, 1879; owners E. L. Gampbell, Amos G. Miller, K. Vollmer, F. S. VanZant, Thos. Murphy, Thos. Bennett, Herman Richnes, H. A. Uthuff, John and Bertha Yoeifel, and John Bear, all Leadville; vein a contact varying in width, containing a deposit of lead carbonates in a decomposed gangue, milling, when sorted, an average of $15 per ton; developed by one shaft 170 feet deep and 800 feet of drifting; improvements—six-horse-power hoisting engine, shaft-houses, ore-bins, ore-chutes, and all other necessary buildings and machinery.

**Occidental Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $50,000, in 5,000 shares of $10 each, non-assessable; president, Wm. Dingle; vice-president, Dr. —— Parker; secretary, —— Rushmore; treasurer, L. A. Watkins, all Denver; offices Leadville and Denver; owns a three-fourths interest in the Ruby mine (See Ruby mine).

**Ocean Wave.**—(See Antelope Mining Company.)

**Olathe Gold and Silver Mining Co.**—Incorporated under the laws of Great Britain; capital stock £150,000, in 150,000 shares of £1 each; secretary, Henry Kendrick, London, Eng.; superintendent, Theodore H. Lowe, Idaho Springs; offices No. 8 Takenhouse Yard, London, Eng., and Idaho Springs, Colo.; owns the Olathe placer of forty acres; situated between Big Evans and Stray Horse Gulches, California district; located in 1879—also patented; on which it is the intention of the Company to sink a shaft to strike the contact.



**Onota, Nos. 1 and 2.**—Owned by Nelson Hallock, Denver, Colo., and others; claims cover twelve acres; situated on East Yankee Hill, California district, one-half mile from Leadville, and patented; vein a horizontal contact, from six inches to four feet in thickness, containing lead carbonates, assaying thirty per cent lead and from fifteen to twenty-four ounces silver per ton; developed by two shafts 60 and 425 feet in depth, respectively, with some drifting; operated by a twenty-five-horse-power pumping, and a twenty-five-horse-power hoisting, engine; with ore and shaft houses, etc.

**Ontario.**—J. W. Faxon, Leadville, J. F. Faxon and W. H. Faxon, both Boston, Mass., James H. Hackett, Jacksonville, Ill., and D. H. Gile, Chicago, Ill., owners; claim 1500x300 feet; situated in Iowa Gulch, California district, five miles from Leadville; located 1877, and in process of patent; vein a horizontal contact, varying from ten inches to four feet in thickness, containing galena and carbonates, assaying from ten to forty-five per cent lead and from ten to fifty ounces silver per ton, in a decomposed gangue; developed by a tunnel sixty feet in length, with some drifting.

**Oran More.**—300x1500 feet; situated in White's Gulch, California district; located in August, 1879; owners Chas. I. Thompson, Daniel Sayer, and Farrell McLaughlin, all Leadville; vein a contact, varying in width, and containing a deposit of iron pyrites in a porphyry gangue; developments—one ninety-foot shaft and one ten-foot drift.

**Orange Blossom.**—300x1500 feet; situated in Iowa Gulch, four miles from Leadville, California district; located in 1879; owners Joel W. Smith, William N. Burdick, G. H. Moulton, and Charles Seybold, all Leadville; vein a contact varying in width, and containing a deposit of lead carbonates; developed by one ninety-foot shaft and one 200-foot tunnel.

**Orion.**—P. B. Plumb, Emporia, Kas., S. O. Thatcher and W. W. Nevison, both Lawrence, Kas., and others, owners; claim covers eight acres; situated on Carbonate Hill, California district; located in 1878, and in process of patent; vein a contact, with a pay streak from two to ten inches wide, containing galena and carbonates in a decomposed gangue; developed by a shaft 370 feet in depth and a tunnel 200 feet in length, with some drifting.

**Oro La Plata.**—(See La Plata Mining and Smelting Company.)

**Orrinamore.**—J. Burke and others, Alma, Colo., owners; claim 1500x300 feet; situated on Iron Hill, California district, three miles east of Leadville; located in 1878; vein a horizontal contact, containing a deposit of carbonates, about five inches thick, assaying forty-five ounces silver per ton; developed by one shaft 140 feet deep and thirty feet of drifts.

**Ouray Mining and Discovery Company (The).**—Incorporated under the laws of Colorado, February 7, 1877; capital stock $10,000,000, in 400,000 shares of $25 each, non-assessable; president, B. F. Jones; vice-president, E. L. Martin; secretary, E. A. Marshall; treasurer, R. H. Cannon—all Kansas City, Mo.; superintendent, A. D. Searl, Leadville; offices Kansas City and Leadville; owns the following placer claims: Howard and Jenkins, 160 acres each; located May 1, 1879, and in process of patent; situated at the junction of Tennessee Gulch and the Arkansas River, two miles from Leadville; Capital, 120 acres, and Searl No. 436, 158 acres; adjoining Leadville on the north, and patented; Alice, eighteen acres, and Sizer, sixty-two acres; situated in Leadville, and patented; and Searl No. 435, 160 acres; also situated in Leadville; located in December, 1877, and in process of patent; on all of which the Company is doing development work, and sinking to strike the contact, which probably underlies the entire district; the property

being quite valuable in any event on account of the surface ground; and also owns property in La Plata County (see La Plata County), Ouray County (see Ouray County), San Juan County (see San Juan County), and Summit County (see Summit County).

**P. O. S.**—John Pentland, J. Temple, S. Reed, and F. F. Brunê, Leadville and Denver, and R. Barrett and others, Galena, Ill., owners; claim covers six acres; situated on Carbonate Hill, California district, one-half mile from Leadville; located in 1876, and in process of patent; vein a contact, varying in width, containing lead carbonates, assaying twelve ounces silver per ton; developed by a shaft 160 feet in depth.

**Palmetto and American Flag.**—Owners M. B. Haas, D. A. Cowell, J. W. Crancer, M. L. Thomas, L. F. Weitly, all Leadville, Colo.; claim covers nine acres; situated in South Evans Gulch and on Bald Mountain, California district, three miles from Leadville; located in 1879, and patented in 1881; vein a contact, with a crevice from three to five feet wide, containing carbonates carrying silver and gold; developed by a shaft 120 feet in depth.

**Park No. 1.**—J. B. Farwell & Co., Chicago, Ill., owners; manager, Tingley S. Wood, Leadville, Colo.; claim 1500x300 feet; situated in Adelaide Park, California district, two and one-half miles from Leadville; located in 1879; vein a contact, with a crevice four feet wide, and a pay streak from four to thirty-two inches, containing carbonates and galena in a porphyry gangue, milling, when sorted, twenty-three per cent lead and ten ounces silver per ton; developed by four shafts, 33, 44, 72, and 175 feet in depth, and 175 feet of drifts; operated by a ten-horse-power engine; output 2,500 tons.

**Parnell.**—300x1500 feet; situated on Printer Boy Hill, California district; located in April, 1881; owners Chas. I. Thompson, Daniel Sayer, John McComb, and others, all Leadville; vein a horizontal contact twenty-eight inches thick, containing lead carbonates in a decomposed gangue; developments—one shaft 180 feet deep.

**Pelican.**—300x1500 feet; situated on Arkansas Mountain, California district; located in 1872; owners T. J. Sweeny and J. H. Roberts, both Leadville; vein probably a fissure, four feet wide, containing quartz and lead carbonates, assaying four per cent lead and twenty ounces silver per ton; developments—one forty-five-foot shaft.

**Penyan.**—H. S. Mastick, Red Cliff, and Robt. Murdock, Leadville, owners; claim 1500x300 feet; situated in Little Frying-pan Gulch, California district, six miles from Leadville; located in 1879; vein a contact, with a crevice thirteen feet wide, containing quartz carrying gold and silver, assaying fifty-five ounces silver and trace of gold per ton; developed by a shaft seventy feet in depth.

**Princeton.**—C. C. Kellogg, I. A. Rosecrans, and others, Leadville, owners; claim covers four acres; situated on the north side of Rock Hill, California district, two miles from Leadville; located in 1879, and in process of patent; vein a contact, with a crevice varying from six inches to three feet, containing lead carbonates, assaying from fifteen ounces to thirty ounces silver per ton, in a porphyry gangue; developed by a shaft ninety feet in depth.

**Princeton Group.**—John Lawson, Samuel Rose, F. F. Bruné, and others, all Leadville, owners; group comprises the Princeton, Key, and Little Blonde lodes, covering twenty-three acres; situated in Little Evans Gulch, California district, three miles from Leadville; located in 1878, and patented



in 1881; vein a contact, varying in width, and containing traces of lead carbonates scattered through the contact; developed by one shaft 150 feet deep and a 250-foot tunnel, with some drifting.

**Ravenna.**—C. C. Kellogg and John A. Smith, both Leadville, owners; claim covers eight acres; situated on Breece Hill, California district; located in 1879, and patented in 1882; vein a contact, with a crevice varying from six inches to four feet in width, and containing carbonates and galena in a decomposed gangue, milling, when sorted, from $25 to $40 per ton; developed by one shaft 140 deep, with some drifting.

**Rebel.**—C. C. Kellogg and others, Leadville, owners; claim covers five acres; situated in Adelaide Park, California district; located in 1878, and in process of patent; vein a contact varying in width, and containing carbonates and galena in a porphyry gangue; developed by a shaft 210 feet in depth, with some drifting.

**Red Fox.**—(See Colorado Land and Mineral Company.)

**Revenue Cutter.**—F. W. Smith, C. A. Milner, and C. W. Taylor all Leadville, owners; claim covers eight acres; situated on Breece Hill, in California district; located in 1881, and patented in 1882; vein a horizontal contact, varying in width, and containing lead corbonates in a decomposed porphpry gangue; developed by two shafts 75 and 165 feet in depth, with some drifting.

**Revenue Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in December, 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, James Streeter; vice-president, J. H. Bohn; secretary, Charles M. Ferree,—all Leadville; treasurer, S. D. Bowker, Kansas City, Mo.; superintendent, Wm. Elliott Lee, Leadville; offices 201 East Seventh street, Leadville; owns the Revenue, Garfield, and Clarenden placers, covering 350 acres of surface ground; situated one and one-half miles above Alicante Station, Alicante district; located in 1880, and in process of patent; veins all contacts, varying in width from two to four feet, and containing quartz and galena; developed by a tunnel 200 feet in length and some other workings.

**Robert Emmet.**—(See Small Hopes Mining Company.)

**Robert E. Lee Silver Mining Company (The).**—Incorporated under the laws of Colorado, November, 1882; capital stock $10,000,000, in 500,000 shares of $20 each, non-assessable; president, Homer Pennock; vice-president, L. D. Roudebush; secretary and treasurer, Willis A. Barnes,—all New York; general manager, John D. Fleming; superintendent, Simon R. Blonger—both Leadville, Colo.; principal office 115 Harrison Avenue, Leadville; transfer office 31 Nassau street, New York; owns the Robert E. Lee, a fractional claim, covering five acres; situated on Fryer Hill, about one mile from Leadville, California district; located June 25, 1878, and patented September 10, 1879; vein a contact, with porphyry and lime walls, or what is called a deposit, varying in thickness from two to twelve feet, and containing chlorides or bromo-chlorides of silver, formed from the decomposition of argentiferous sulphides, or what might be termed a very rich chloride ore, in a decomposed porphyry gangue, milling, when sorted, from $80 to $1,800 per ton; developments—six shafts, aggregating 1,100 feet, with a large amount of drifts and other workings; improvements—steam hoisting and pumping machinery, sampling-works, with motive power supplied by a twenty-five-horse-power engine, ore-houses, shaft-houses, and other buildings; dividends paid, $3,000,000; the property having been a very large producer, the aggregate output being estimated

at nearly $4,000,000. (This mine was formerly owned by the Robert E. Lee Mining Company, a corporation organized under the laws of New York; afterwards passed into the hands of the present owner.)

**Roseville-Alta Consolidated Mining Company (The).**—Incorporated under the laws of New York, in October, 1880; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, Fred. O. Sawyer; vice-president, Lyman A. Cook; secretary, Fred. F. Baury; treasurer, L. O. Robertson; manager, N. N. Robertson; office Room 108 No. 71 Broadway, New York, and 115 West Third street, Leadville; owns twelve claims, covering about 100 acres, viz.: Roseville, Noyes, Garfield, Lyman A. Cook, and Abe Lincoln; situated on the north side of Big Evans Gulch, between Little Evans Gulch and the Arkansas River; the Roseville located in 1879, and the others in 1881 and 1882; vein a horizontal contact, varying in width, and containing a deposit of carbonates and chlorides, assaying from 8 to 1,898 ounces silver per ton; developments—shafts and drifts aggregating 500 feet; improvements—one shaft-house 28x52 feet, containing a sixty-horse-power boiler, a forty-horse-power engine, and one Cope & Maxwell Steam Pump, capacity 140 gallons per minute, for working the property; and Alta No. 1, Alta No. 2, Alta No. 3, Alta No. 4, Alta No. 5, Little Fraction, and Golden Edge; situated on the west bank of the Arkansas River, north of Buckeye Gulch; veins probably fissures, varying in width, and containing free-milling quartz carrying both gold and silver; developments—600 feet of shafts and tunnels, with some other workings; all these claims are in the California district, about six miles from Leadville, and, with the exception of the Abe Lincoln and Lyman A. Cook, were patented in July, 1882.

**Rothschild Silver Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, F. R. Walton, Philadelphia, Pa.; vice-president, J. W. Faxon, Leadville; secretary, E. P. Michner; treasurer, Archibald C. Haynes—both Philadelphia, Pa.; office Room 19 Quincy Block, Leadville; owns one claim, viz., the Rothschild, 1500x300 feet; situated in Bird's-eye Gulch, California district, seven miles from Leadville; located in 1879, and patented in 1882; vein a horizontal contact, varying in width from four to thirty inches, and containing galena, with some chlorides and sulphurets, assaying 150 ounces silver per ton, in a porphyry gangue; developed by a shaft eighty feet in depth, a tunnel 285 feet in length, and a drift thirty feet long.

**Ruby.**—300x1500 feet; situated on the east slope of Iron Hill, two miles from Leadville, California district; located in 1878, and patented in June, 1880; owners the Occidental Mining Company and Jno. L. Pendery, Leadville; vein a horizontal contact, varying in width, and containing lead carbonates, with iron pyrites and galena, carrying both gold and silver in a decomposed gangue, milling, when sorted, from $20 to $50 per ton; developments—one shaft 500 feet deep, with some drifting; worked by steam hoisting and pumping machinery; motive power supplied by a forty-horse-power engine.

**Sappho Mining Company.**—Incorporated under the laws of New York, in January, 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president and trustee, J. L. Emerson; vice-president and treasurer, James H. Kidder; secretary, R. G. Page—all New York City; offices 519 Harrison Avenue, Leadville, and 115 Nassau street, New York; owns one claim, viz., the Sappho, 1500x300 feet; situated on Yankee Hill, California district; located in 1878, and patented in 1881; vein a horizontal contact, varying in width, and containing a deposit of lead carbonates in a decomposed porphyry gangue; developed by two shafts 125 and 265 feet in depth and four levels aggregating 350 feet, with some other workings; inprovements—shaft and ore houses, etc.



**Satellite Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, B. F. Smith; secretary, T. H. Baker; treasurer, J. M. Maxwell—all Leadville; owns the Satellite, No Name, Alice, and Washington claims, covering thirty acres; situated on Iron Hill, below the Iron mines, California district; located in 1879; vein a horizontal contact, varying in width, but with no defined deposit, or ore-body; developed by one 200-foot shaft.

**Saw-tooth.**—Charles Taylor, George Farrel, Edward Lowry, Patrick Martin, Edward Murray, Martin Murray, and Wm. Welch, all Leadville, owners; claim 1500x300 feet; situated on Iron Hill, adjoining the Argentine Group, California district; located February 10, 1882; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed porphyry gangue; developed by shaft 175 feet in depth, with some other workings; operated by a six-horse-power engine.

**Scooper.**—(See Iowa Gulch Mining Company.)

**Shamus O'Brien.**—(See Denver City Consolidated Mining Company.)

**Sierra Nevada.**—300x1500 feet; situated in Nugget Gulch, adjoining the A. Y. and Col. Sellers mines, California district; located in 1880, and patented in 1882; owners Gen. Wm. L. Campbell, Denver, A. J. Johnson and Oliver C. Obey, both Leadville, and Walter Welch, New York City; vein probably a fissure, two feet wide, pay streak three inches, containing galena in a quartzite gangue-matter; developments—one 400-foot incline and one shaft sixty-five feet deep, with some other workings.

**Silver Cord Combination Mining Company (The).**—President, J. B. Grant, Denver; general manager, Tingley S. Wood, Leadville; owns the Silver Wave and seven other locations, besides sixty acres of additional surface ground; situated on Iron Hill, and joining the Iron Silver Mining Company's property, about one mile from Leadville; vein a contact, varying in width from two to fifty feet; the compromise with the Iron Silver Company, and the purchase of the Silver Wave, giving this Company 900 feet along the apex of the vein, containing lead and iron carbonates, and oxides, in a decomposed porphyry gangue, milling, when sorted, from twenty to twenty-five per cent lead and from twenty to twenty-five ounces silver per ton, or a net profit of $15 to $20 per ton, after deducting the cost of mining, hauling, and treating; developments—inclines, shafts, levels, and winzes, amounting to thousands of feet, showing large ore-reserves, extending into the underlying lime, a winze in the Silver Wave, sunk from the level south of the main incline, exposing an ore body over fifty feet in thickness, and another incline about 200 feet from the main one, but connected with it, extends down through an ore cave for over forty-five feet; improvements—steam hoisting and pumping machinery, ore-houses, shaft-houses, etc.; monthly shipments about 1,200 tons.

**Silver Mask.**—300x1500 feet; situated in Colorado Gulch, California district; located in 1880; owners Chas. I. Thompson, Danl. Sayer, Wm. Ardell, and L. H. Beasy, all Leadville; vein probably a fissure, fifteen feet wide, pay streak sixteen inches, containing iron pyrites and talc carrying silver; developments—one tunnel 150 feet long on the vein.

**Small Hopes Mining Company.**—Offices Leadville; owns four claims, viz.: Robert Emmet, Forest City, and Result, 1500x300 feet each, and the Ranchero, 1500x220 feet; situated on the Stray Horse Gulch slope of Yankee Hill, one mile from Leadville, California district; vein a horizontal contact,

varying in width, and containing mainly large bodies of low-grade iron and lead carbonates, in a decomposed porphyry gangue, milling, when sorted, from $20 to $40 per ton, with occasional pockets of high-grade chlorides, yielding from 50 to 500 ounces silver per ton; developments—shafts, levels, winzes, etc., and are quite extensive, the property having of late been worked with a view to its development rather than increased production, although large quantities of ore have been shipped, especially from the Robert Emmet; improvements—steam machinery, ore-houses, shaft-houses, etc.

**Smuggler Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president, Clinton Reed; vice-president, Charles S. Thomas; secretary, Charles A. Hinckley; treasurer, Philip Golding—all Leadville; offices Room 2 Monheimer Block, Leadville; owns the Smuggler Group of mines, comprising the Smuggler and Star of Hope claims, covering twelve acres; situated on Iron Hill, California district; located in 1877, and patented; vein a horizontal contact, from one to sixteen feet in width, containing hard carbonates in a decomposed gangue, milling, when sorted, from thirty to forty per cent lead, from ten to sixteen ounces silver, and some gold, netting about $15 per ton, after deducting the cost of mining, hauling, and treating; developed by three shafts, 45, 61, and 135 feet feet in depth, with considerable drifting; improvements—steam machinery, motive power supplied by two eight-horse-power engines, ore-houses, shaft-houses, etc.; output from July, 1881, to May, 1882, $30,000, and subsequent to that date about $15,000 per month; dividends paid—three regular, of eight per cent each, and two extra of five per cent each, from June 1st to September 1, 1882.

**Soda Springs Placer.**—T. Kyle and Robert Berry, both Leadville, and J. Blake Walters, Harrisburgh, Pa., owners; claim covers thirty-six acres of surface ground; situated six miles from Leadville; developed by five miles of ditching, with some other workings.

**South Side Milling and Mining Company.**—Incorporated under the laws of Colorado, in May, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, C. J. Rowell; vice-president, J. F. Tabor; secretary, John J. McGowan; treasurer, James C. Whitehill, all Leadville—office Rooms 4 and 5 Boston Block, Leadville; owns two full claims 1500x300 feet each, and a tunnel site, 3,000 feet; situated in Lackawanna Gulch, Lake Creek district, eighteen miles from Leadville; vein probably a contact, about four feet wide, containing gold-bearing quartz, assaying fairly; developed by a tunnel 160 feet in length, cutting the vein at a depth of 400 feet, with some other workings.

**St. Bernard Mining Company.**—Incorporated under the laws of Colorado, July 23, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Chas. Donnelly; vice-president, Frank McGuire; treasurer, Michael Finnerty—all Denver; secretary, John A. Sheridan; general manager, Peter Finnerty—both Leadville; office 110 West Third street, Leadville, Colo.; owns the Clontarf and Moyamensing mines, covering fifteen and one-third acres; situated on Carbonate and Yankee Hills, California district; located in 1878 and 1879, and in process of patent; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed gangue, milling, when sorted, from twenty-five to sixty per cent lead and from ten to twenty ounces silver per ton; Clontarf developed by a shaft 576 feet deep and some drifting, and the Moyamensing by an eighty-five-foot shaft; improvement—one ten-inch Cornish Pump, and hoisting machinery, motive power supplied by two fifty-horse-power engines, ore-houses, shaft-houses, etc.



**St. Julien.**—Five acres; situated in Adelaide Park, two miles from Leadville, California district; located in May, 1882; owners E. C. Van Pelt, Edward Weir, R. C. McLeod, and O. T. Triplett, all Leadville; vein a contact, varying in width and containing a deposit of lead carbonates in a decomposed gangue; developments—one shaft 119 feet deep.

**St. Louis Smelting and Refining Company (The).**—Incorporated under the laws of Missouri; capital stock $2,200, in 2,200 shares of $1 each, non-assessable; president, Edwin Harrison; vice-president, Geo. W. Chadbourne; secretary, Geo. H. Loker, Jr.; treasurer, Geo. H. Loker, Sr.—all St. Louis, Mo.; general manager, F. Fohr, Leadville; office Leadville; owns the Harrison Reduction-works; established in 1878, and situated at Leadville; constructed of wood, with iron roofiing, and consisting of a smelting-building, containing four Furnaces, three Blake Crushers, Cornish Rolls, one engine-house containing two engines, forty and eighty horse-power, ore-bins, etc.; capacity 100 tons per day (twenty-four hours). Also owns the Argentine Group, comprising five claims, viz.: Pine, Camp Bird, Charlestown, Keystone, and Young America, covering forty acres; situated on Iron Hill, California district; located in 1877, and patented in 1879–80; vein a contact, varying in thickness, and containing heavy galena and lead carbonates in a decomposed gangue, milling, when sorted, from twenty to thirty per cent lead and from 50 to 100 ounces silver per ton; developed by 1,500 feet of tunneling, with some shafts and drifts; improvements—steam machinery and some buildings.

**Star of Hope.**—(See Smuggler Consolidated Mining Company.)

**Star of the West Mining Company (The).**—Incorporated under the laws of Colorado in July, 1881; capital stock $3,000,000, in 300,000 shares of $10 each; president, H. C. Rose; vice-president, Thos. B. Mayberry; treasurer, Dr. J. J. Crook; secretary, Wm. D. Gammon; general manager, Hans Jans; superintendent, Thos. S. Smith; office 26 Boston Block, Leadville; owns seven claims, 300x1500 feet each, viz.: Star of the West, Mattie Rose, Nannie R., Omar, Belle of the West, Black Cloud, and Maggie; situated on French Mountain, at the head of South Half-moon and Lackawanna Gulches, fourteen miles from Malta, California district; on which the Company is doing development work; veins all fissures from four to twelve feet wide, containing quartz and galena with some copper and bismuth, on which assays have been obtained from twenty to forty per cent lead and from 50 to 150 ounces silver per ton.

**Stonewall Jackson.**—A fractional claim covering four acres; situated on Fryer Hill, one mile from Leadville, California district; located in January, 1881; owners C. A. Manners, Daniel M. Reardon, Patrick F. and James Moran, all Leadville; vein a horizontal contact varying in width, and containing a deposit of carbonates in a decomposed gangue, milling, when sorted, from five to fifteen per cent lead and from 10 to 100 ounces silver per ton; developed by one shaft 185 feet and 300 feet of drifting; improvements—steam hoisting machinery, ore and shaft houses, etc.

**Stonewall Jackson.**—300x1500 feet; situated on the divide between Little Evans Gulch and the Arkansas River, four miles north-east of Leadville, California district; located in 1878; owners S. D. Wilson, G. M. Jacobs, and G. S. Gordon, all Breckenridge, and Joseph Bero and Jerome S. Riche, both Denver; vein a horizontal contact varying in width, and containing a deposit of lead carbonates, assaying $85 per ton, in a decomposed gangue; developed by one shaft eighty-five feet deep.

**Stray Horse Gulch Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $1,500,000, in 150,-

000 shares of $10 each, non-assessable; president, N. Rollins; vice-president, J. C. Adams; secretary and treasurer, J. F. Frenoff; superintendent, John A. Farrow—all Leadville; office 303 Harrison Avenue, Leadville; owns the Rarus, 300x1500 feet; situated in Adelaide Park, two miles east of Leadville, California district; located in 1877, and patented in July, 1882; vein a horizontal contact varying in width, and containing a deposit of lead carbonates in a decomposed gangue, the property almost surrounded by paying mines containing mineral in that form; developments—one shaft 102 feet deep, worked by steam machinery.

**Sullivan.**—(See Great O'Sullivan.)

**Sunday.**—T. J. Anderson, J. T. Black, A. J. Briggs, E. L. Briggs, A. W. Collins, J. S. Cunningham, J. B. Elliott, A. J. Kerr, J. M. Donnelly, T. S. Cathcart, J. D. Thompson, L. Kinkead, E. H. Amos, all Knoxville, Ia., Anna E. Davis and Geo. W. Bright, Columbus, Ohio, and Robt. Anderson, Plattsmouth, Neb., owners; claim 1500x300 feet; situated on the west slope of Bald Mountain and at the head of California Gulch, California district, four miles from Leadville; located in 1878, and patented in 1882; vein a horizontal contact, with a crevice three feet wide, containing galena and iron sulphides, assaying fifty per cent lead, thirty ounces silver, and from one to three ounces gold per ton; developed by an incline tunnel 150 feet long, with a sixty-foot drift, and someother workings.

**Superior and Lawrence.**—M. A. Lawrence, Alma, and S. C. Whiting, Laporte, Ind., owners; claims 1500x300 feet each; situated on the east slope of the Park Range and at the extreme head of the Arkansas River, Alicante district, ten miles from Leadville; veins probably fissures, with crevices about four feet in width, and pay streak about three feet, containing quartz carrying silver, assaying from 30 to 742 ounces silver per ton; developed by sixty feet of shafting and tunnels.

**Tabor Milling Company (The).**—Incorporated under the laws of Colorado in January, 1880; president, H. A. W. Tabor, Denver; general manager, Geo. H. Bell, Leadville; office Leadville, Colo.; works situated on California Gulch, at Leadville, consisting of a stamp-mill, containing twenty Stamps (Fraser & Chalmers, Chicago, makers), with the necessary motive power; capacity eighteen tons in twenty-four hours; production from January 1, 1882, to September 1, 1882, 241,000 ounces bullion, gross, or 217,000 ounces fine; (this mill was burnt down in the early part of the present year).

**Terrible Mining Company (The).**—Incorporated under the laws of New York; capital stock $125,000, in 100,000 shares of $1.25 each, non-assessable; president, R. P. Lounsbury; secretary and treasurer, Henry K. McHarg—both New York; general manager and superintendent, Walter M. Church, Leadville; offices 33 Wall street, New York, and at the mines, Leadville; owns two adjoining claims, viz.: the Terrible, covering seven acres, and the Adelaide, ten and one-third acres; situated on the north slope of Iron Hill, California district; located in 1879, and patented in 1882; vein a horizontal contact from six inches to ten feet wide, containing lead and iron carbonates in a decomposed gangue, yielding an average of $15 per ton, net, after deducting the cost of mining, hauling, and treating; developments—eight shafts from 30 to 380 feet in depth and aggregating 900 feet, and two tunnels thirty and seventy feet in length, with considerable drifting, winzes, stoping, etc.; improvements—steam hoisting and pumping machinery, motive power supplied by one thirty-horse-power engine, shaft-houses, ore-houses, etc.; daily shipments ten tons.



**Thespian.**—David K. Hill and Chas. L. Willoughby, both Chicago, Ills., Geo. E. Stedman, New York City, Edward Stanwood and Edward Floyd, both Boston, Mass., owners; manager, Geo. A. Jenks, Leadville; claim covers six acres; situated on Carbonate Hill, California district, one-half mile from Leadville, and in process of patent; vein a horizontal contact, with a crevice fifteen inches wide, containing lead carbonates in a decomposed gangue, milling, when sorted, forty per cent lead and from fifty to seventy-five ounces silver per ton; developed by one shaft 535 feet in depth, with some drifting; improvements—steam hoisting and pumping machinery, motive power supplied by two engines seventy and thirty horse-power, ore and shaft houses, etc.

**Thompson.**—(See C. I. Thompson.)

**Tinner Boy.**—Geo. L. Camp and others, Tin Cup and Leadville, owners; claim 1500x300 feet; situated in Tennessee Gulch, Home-stake district, seven miles north-east of Leadville; located in 1879; vein a horizontal contact, with a crevice five feet wide, containing quartz carrying gold and silver; developed by a shaft 100 feet in depth.

**Triune Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $3,000,000, in 60,000 shares of $50 each, non-assessable; president, D. M. Harkness, Bellevue, Ohio; vice-president, Charles Foster, Fostoria, Ohio; secretary, J. C. Lee, Toledo, Ohio; treasurer, O. F. Myers; general manager, W. Elliott Lee—both Leadville; office 201 East Seventh street, Leadville, Colo.; owns the Triune Group, comprising four placer claims, viz.: the Triune, Upper Arkansas, Triptan, and Lake, covering 600 acres of surface ground; situated at the head of the Arkansas River, Alicante district, three-fourths mile from Alicante Station; located in 1879, and in process of patent; developed by a tunnel 425 feet in length, with some other workings.

**Troglodyte Silver Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. H. O'Neil; vice-president, J. H. Bohn; secretary, R. W. Jones; treasurer, A. E. Colby; superintendent, E. J. McKitrick; office Fifth and Olive streets, St. Louis, Mo., and Leadville; owns four claims, 1500x300 feet each, viz.: Charles Sumner, Gen. Grant, Maud, Miller, and Miller, Jr., and one placer claim, the Mississippi, 135 acres; situated at the head of Little English Gulch, and on the west side of Arkansas Mountain, California district; located in 1879; vein a horizontal contact, varying in width, and containing iron and lead carbonates and gold-bearing quartz; developed by 190 feet of tunnels.

**Twin Lakes Mining Company.**—(Unincorporated); composed of Horace Steele, D. P. Eels, and estate of Jas. A. Garfield, all Ohio, W. R. Peabody, Atchison, Kas., W. P. Farris, Georgetown, and George C. Steele, Leadville, the last of whom is manager; office 404 Harrison Avenue, Leadville; owns one claim, the Pomeroy, 1500x300 feet; situated on Red Mountain, California district, three miles from Leadville, and patented in November, 1879; vein a horizontal contact, varying in width, and containing carbonates and copper in a porphyry gangue, milling, when sorted, six per cent copper, from twenty to thirty ounces silver, and from one to two and one-half ounces gold per ton; developments—one seventy-four-foot shaft and a tunnel 120 feet long, with some other workings; output 200 tons.

**Ulster.**—Paul Weitzel, John Kernes, Neil McMillen, Scott Ashton, and Arthur Chanute, all Leadville, owners; claim covers six acres; situated in Adelaide Park, California district, two and one-half miles from Leadville;

located in May, 1882; vein a horizontal contact, varying in width, and containing a deposit of lead carbonates in a decomposed gangue; developed by two shafts 40 and 400 feet in depth and a seventy-foot drift.

**Unexpected Group.**—J. M. Carey, Leadville, and A. A. Wiswall, Chicago, Ill., owners; group comprises the Unexpected, Hidden Treasure, and Montrose lodes, 1500x300 feet each; situated on Bird's-eye Mountain, California district, eight miles from Leadville; located in 1879; vein a horizontal contact, varying in width, and containing galena and carbonates in a porphyry gangue; developed by two shafts 58 and 100 feet in depth, with some other workings.

**Union Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois, in 1879; capital stock $300,000, in 15,000 shares of $20 each, non-assessable; president, T. Thomas, Baraboo, Wis.; vice-president, H. J. O. Walker; secretary and treasurer, A. H. Hitchcock—both Chicago; general manager, A. B. Capron, Leadville; offices 152 La Salle street, Chicago, Ill., and Leadville, Colo.; owns the following claims, viz., Little Maria, Marshall, Evanston, and Plymouth, 1500x300 feet each; situated in the California district, near Leadville; on which the Company are sinking to strike the contact known to exist, but which they have not yet reached, containing lead carbonates, in a decomposed gangue.

**Union Rebel.**—W. S. Cheesman, Geo. W. Clayton, and D. C. Oswald, all Denver, and D. D. Belden, Red Cliff, owners; claim 1500x300 feet; situated on Bald Mountain, California district, three and one-half miles from Leadville; located in 1878, and patented in 1880; vein a horizontal contact, varying in width, and containing from five to eight inches in width of galena and carbonates, which assay thirty-six per cent lead and twelve ounces silver per ton, in a decomposed gangue; developed by a shaft eighty-five feet in depth.

**Vanderbilt.**—S. D. Wight, Detroit, Mich., Chester Bullock, Jervis Joslin, and Boyd Park, all Leadville, owners; G. W. Hull and J. B. Parks, both Leadville, lessees for one year, expiring July 5, 1883; claim 1500x300 feet; situated on Yankee Hill, California district, one-half mile from Leadville; located in 1879; vein a contact, varying in width, and containing lead carbonates in a decomposed gangue, milling, when sorted, fifteen per cent lead and ten ounces silver per ton; developed by one shaft 165 feet in depth and eighty feet of drifts; daily shipments ten tons.

**Venture.**—300x1500 feet; situated in Frying-pan Gulch, six miles from Leadville, Independence district; located in April, 1879, and in process of patent; owners S. Ayres, Jr., Amos G. Miller, Milton Charles, and L. J. Smith, all Leadville; vein probably a fissure, four feet wide, containing quartz and galena, milling, when sorted, fifty ounces silver per ton; developed by one 300-foot tunnel on the vein, one sixty-eight-foot shaft, with considerable drifts and inclines; worked by steam machinery.

**Vermont Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 25,000 shares of $20 each, non-assessable; president, M. C. Hyde, Vermont; vice-president, E. C. Sandell; secretary, F. W. Smith; treasurer, Jervis Joslin—all Leadville; office 118 East Sixth street, Leadville, Colo.; owns the Esperanza claim, covering ten acres; situated in Big Evans Gulch, California district, two miles from Leadville; located in 1879, and patented in 1882; vein a horizontal contact, with a crevice from six to twenty inches wide, containing lead carbonates in a decomposed gangue, milling, when sorted, thirty per cent lead and twenty ounces silver per ton; developed by one shaft 115 feet deep and 100 feet of drifts; improvements—steam machinery, motive power supplied by one fifteen-horse-power engine, shaft-house, etc.



**Vining.**—(See Argent Mining Company.)

**Wabash Mining and Milling Company (The).**—Incorporated under the laws of Missouri, in 1880; capital stock, $100,000, in 4,000 shares of $25 each, non-assessable; president, M. G. Corey, Kansas City, Mo.; vice-president, B. W. Alexander; treasurer, B. Walker; secretary, S. H. Miller,—all St. Louis; general manager, Robert M. McDermott, Leadville; offices 305½ Olive street, St. Louis, and at Leadville; owns the Wabash Group, comprising eleven claims, 1500x300 feet each; situated on French Mountain and in Lackawanna Gulch, Lackawanna district; located in 1880; vein a contact, varying in width, and containing galena and copper, in a porphyry gangue, milling, when sorted, twelve per cent copper and forty ounces silver per ton; developed by eight tunnels from twenty-five to fifty feet in length.

**Wadena.**—M. B. Haas, Patrick Reiley, and Wm. Milner, all Leadville, owners; claim 1500x300 feet; situated in Bird's-eye Gulch and on the Mosquito Range, California district; located in 1882; vein a contact, varying in width, and containing galena and carbonates in a porphyry gangue; developed by a tunnel thirty feet in length.

**Wallace.**—Smith P. Brown, Theodore Curran, and others, Leadville, owners; claim 1500x300 feet; situated in Little Evans Gulch, California district, three miles from Leadville; located in 1879; vein a horizontal contact, varying in width, and containing galena in a porphyry gangue, milling, when sorted, twenty-five ounces silver per ton; developed by one 340-foot shaft, with some drifting.

**Walnut Group.**—Comprising the Walnut, Chestnut, and Iron Queen lodes; Harley B. Morse, Central City, John H. F. Chapman, Leadville, H. C. Balsinger, John S. Stallcup, and Chas. Patterson, Denver, owners; claims cover eighteen acres; situated in Graham Park, between Iron and Carbonate Hills, California district; located in 1879, and patented in 1882; vein a horizontal contact varying in width, and containing sand carbonates in fine layers, assaying from $30 to $60 per ton; Walnut developed by a shaft 217 feet in depth, Chestnut by shaft sixty-five feet in depth, and Iron Queen by shaft seventy feet in depth, with some other workings.

**Warsaw.**—L. K. Thacher, Kansas City, S. B. Warren, Emporia, Kas., L. W. Spring, Lawrence, Kas., owners; claim 1500x300 feet; situated in Little Evans Gulch, California district, four miles from Leadville; located in 1878, and patented in 1881; vein a horizontal contact, with a crevice from six to twenty-two inches, containing carbonates carrying both gold and silver; developed by shaft fifty feet in depth and a tunnel 100 feet in length.

**Washburn, St. Mary, Carbonate Hill, and Catalpa.**—Niells Larsen and others, Leadville, owners; group covers ten acres; situated on Carbonate Hill, California district, one-fourth of a mile from Leadville; located in 1878; vein a horizontal contact, from three to fifteen inches in width, of carbonates in a decomposed gangue, milling, when sorted, twenty per cent lead and sixty ounces silver per ton; developed by two shafts 240 feet deep each; operated by a fifteen-horse-power engine.

**Waterloo.**—(See Morning Star Consolidated Mining Company.)

**Watertown.**—(See Claremont Mining and Milling Company.)

**Wax.**—300x1500 feet; situated on Long and Derry Hill, four and one-half miles from Leadville, California district; located in 1879; owners A. J. Williams, Denver, J. D. Monroe, and ——— Rasmus, both Leadville; vein a

horizontal contact, varying in width, and containing a deposit of lead carbonates, on which assays have been obtained from $25 to $100 per ton; developed by one sixty-foot shaft.

**Wednesday.**—M. B. Haas, D. A. Cowell, M. M. Andy, J. W. Crancer M. S. Thomas, and J. A. McGonigle, all Leadville, owners; claim 1500x300 feet; situated on Bald Mountain, California district; located in 1877, and patented August 31, 1881; vein a horizontal contact, with a crevice from two to six feet wide, containing carbonates carrying gold and silver; developed by a tunnel 225 feet in length and a shaft sixty feet in depth.

**White's Gulch Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, N. Rollins; vice-president, W. F. Gleason; secretary and treasurer, C. C. Parsons—all Leadville; office 303 Harrison Avenue, Leadville; owns seven claims, viz.: Xenium, Laura, Occidental, Edith Tangier, Fanny, Fraction, and Radnor; situated in White's Gulch, three miles from Leadville, California district; located in 1879 and 1880; vein a horizontal contact, varying in width, and containing a deposit of iron and galena in a lime formation; developments—one 540-foot tunnel on Xenium, one ninety-three-foot shaft on the Laura, one sixty-four-foot shaft on the Occidental, from which two-ounce assays in gold have been obtained, one shaft 143 feet deep on the Edith Tangier, and on each of the other two one seventy-foot shaft each.

**Wm. Wallace.**—John Deere & Co., Moline, Ill., owners; general manager, Geo. W. Sharp, Leadville; claim 1500x300 feet; situated on Carbonate Hill, adjoining the Yankee Doodle mine, California district; located in 1878, and in process of patent; vein a horizontal contact, with a crevice from four to twenty feet wide, containing carbonates, assaying sixteen per cent lead and eleven ounces silver per ton, in a decomposed gangue; developed by a shaft 650 feet in depth, with some other workings; operated by hoisting and pumping machinery; motive power supplied by two forty-horse-power engines.

**Wolf Tone.**—(See Agassiz Consolidated Mining Company.)

**Yankee Doodle.**—(See Carbonate Hill Mining Company.)

**Yankee Hill Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in 1880; capital stock $2,500,000, in 100,000 shares of $25 each, non-assessable; president, H. B. P. Baxter, Pueblo; secretary, R. E. Goodell, Leadville; treasurer, C. P. Elder, Denver; general manager, J. W. Wallace, Leadville; office 226 Harrison Avenue, Leadville; owns four fractional claims, viz.: Red-headed Mary, Logan No. 1, Logan No. 2, and Dimick, covering twenty-four acres of surface ground; situated on Yankee Hill, California district, one mile from Leadville; located in 1878-79; vein a horizontal contact, varying in width, and containing lead carbonates in a decomposed gangue; developments—four shafts from 150 to 260 feet in depth, with some other workings.


# C. M. PERIN,

# Civil and Mining Engineer,

COUNTY SURVEYOR LA PLATA COUNTY,

CITY ENGINEER DURANGO, COLORADO.

Mining Properties, Mill Sites, Agricultural Lands, etc., in all parts of the San Juan, carefully examined.

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Sec'y and Treas.

# La Plata County.

This County was organized in 1874, and forms the extreme south-western division of the State, adjoining the Territories of Utah and New Mexico; and is bounded on the north by Dolores and San Juan, and on the east by Hinsdale and Conejos counties. It has an estimated population of 6,000, with the brisk and progressive town of Durango, situated on the Animas River, at one of the principal gate-ways to the San Juan mineral region, as its county seat and chief center, and covers an area of 4,100 square miles; a territory rich in resources, agricultural, pasturable, and mineral, containing vast tracts of fine arable land, much of it under tillage, or devoted to stock-raising, coal-mining forming one of the chief industries. The gold and silver mines, however, attracted but little attention until the advent of the D. & R. G. R'y, a little over two years since. They are situated on the La Plata River, around Parrott City, on Junction and Bear Creeks, and in the Needle Mountains, where considerable prospecting and development work has been done, and all of which sections are connected with Durango by wagon road. In the Needle Mountains the veins are generally large, in a granite and porphyry formation, and the ores usually low-grade, while in the La Plata and Junction Creek districts there is a belt of telluride veins, as a rule varying in width from one to six feet, of peculiar interest to the scientist, and giving promise of great value when thoroughly opened. The major part of the mineral is sylvanite, distributed in small needle-like filaments through a greenish compact quartz, and more rarely as plates in seams or fractures. They differ from the lodes in other telluride sections in being confined tc sedimentary rocks of the Triassic age, whereas this character of ore is usually found in granite, or eruptive, formations.

The product of these sections is estimated at about $25,000, but with increased reduction facilities the annual output will rapidly increase. The coal is of a good quality, easily coked, and the measures are found in the valley of the Animas, in connection with which are large deposits of brown hematite and magnetic oxide of iron. In this valley there are some fair placer grounds, but they have been worked only to a limited extent.

**Amethyst.**—300x1500 feet; situated on the south slope of Lewis Mountain, nine miles north-east of Parrott City, California district; located in July, 1879; owners the Devau Mining Company, John Reid, and J. W. Jackson, both Durango, R. B. Latham, Lincoln, Ills., and G. A. Jackson, Jackson, Mich.; vein a fissure four feet wide, pay streak ten inches, containing galena and copper pyrites, assaying $100 per ton, in a quartz gangue; developed by one twenty-five-foot open cut.

**Annie.**—300x1500 feet; situated in Bowen's Gulch, six miles north of Parrott City, California district; located in 1881; owners E. D. Morgan, Chris.



Wichman, and Jos. H. Billingsley, all Durango, and —— Griggs, Denver; vein a fissure twenty-four inches wide, containing silver-bearing quartz, assaying fifty ounces silver per ton; developed by one thirty-foot tunnel.

**Ashland.**—300x1500 feet; situated on the top of Lewis Mountain, nine miles north-east of Parrott City, California district; located in 1879, and patented in February, 1883; owners the Devau Mining Company, F. M. Goodykoontz, and J. W. Kendall, both La Plata City; vein a fissure three feet wide, pay streak ten inches, containing an amalgam ore in a quartz gangue, milling, when sorted, $175 per ton; developed by one shaft thirty-five feet deep and one open cut 100 feet long and thirty-five feet deep.

**Aurora Group.**—Three claims, 300x1500 feet each, viz.: Aurora, Henry Clay, and Jim Smith, and one claim 300x800 feet, the Jewel; situated on the east fork of Ruby Gulch, fifteen miles north-west of Durango, California district; located in May, 1879; owner Geo. Wilkinson, Red Wing, Minn.; veins all fissures, from one to six feet wide, pay streaks from six to twenty-two inches, containing gold amalgam in a quartz gangue, assaying from $100 to $200 per ton; developments—four open cuts, one on each claim, with fifteen-foot faces each, and one tunnel 250 feet long, cutting the Henry Clay vein at a depth of seventy-five feet, and designed to cut all the others.

**Bay City.**—300x1500 feet; situated on the west side of Bear Creek, fifteen miles north-west of Parrott City, California district; located in June, 1880; owners William and Frank Keough, Edward Hendricks, and S. A. Skinner, all Durango; vein a fissure twenty feet wide, pay streak eighteen inches, containing gold-bearing quartz, assaying from $150 to $200 per ton; developments—one twelve-foot shaft and one ten-foot-face cut.

**Bear Creek Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, December 4, 1882; capital $300,000, in 30,000 shares of $10 each, non-assessable; president, G. W. Kephart; secretary and treasurer, John C. Langley—both Durango; vice-president, T. F. Emerson; general superintendent, John W. Moore—both Animas City; office Durango; owns four claims, 300x1500 feet each, viz.: Terrible, Carl, Wesly, and Bluebird; situated at the head of Bear Creek, twelve miles north of Parrott City, California district; located in July, 1880; veins all fissures, from one to seven feet wide, pay streaks from six to twenty inches, containing iron pyrites and some galena in quartz, carrying gold and silver, assaying from $30 to $50 per ton; developed by one tunnel seventeen feet long, one open cut and tunnel fifteen feet long, and one open cut with a twelve-foot face; and the Little Bertie; situated at the head of the West Mancus, fourteen miles north of Parrott City, California district; located in June, 1882; vein a fissure fifteen feet wide, pay streak eighteen inches, composed of quartz carrying arsenical silver, assaying $35 per ton; developed by one ten-foot-face open cut.

**Belcher Group.**—Five claims, 300x1500 feet, viz.: Belcher No. 1, Belcher No. 2, Northern Spy, Maud S, and Magnolia; situated in Wall's Gulch, and on the east slope of Lewis Mountain, fourteen miles north of Durango, California district; located in July, 1879; owner H. L. Wall, Durango; veins all fissures, averaging three and one-half feet in width, with pay streaks from ten to fourteen inches in width, containing galena, assaying from $40 to $50 per ton, in a quartz gangue; developments—one open cut and tunnel fifty feet long, twenty feet of which is under cover, on each of the three first, and two open cuts, with ten-foot faces each, on the two last claims.

**Belle Hamilton and Cyclone Mining and Milling Company (The).**—Incorporated under the laws of Colorado, October 7, 1882; capital stock $100,000, in 4,000 shares of $25 each, non-assessable; pres-

ident, C. L. Petherbridge; secretary and treasurer, A. R. Lewis; manager, W. A. Bennett; directors, the same with F. C. Lawrence and J. G. Markley—all Durango; owns the Belle Hamilton and Cyclone, two adjoining claims on the same vein, 300x1500 feet each; situated on Bear Creek, seventeen miles north of Parrott City, California district; located in 1880; vein a fissure, from one to four inches wide, containing wire silver, copper, silver glance, and some iron and copper pyrites, in a quartz gangue, milling, when sorted, from $750 to $1,000 per ton, but the vein described is only a spur of the main vein, which last is five feet wide, containing mineralized quartz; developed by two open cuts with twenty-foot faces each and one tunnel 240 feet long, cutting the spur, on which there is twenty feet of drifting, and designed to cut the main vein 110 feet deep.

**Big Giant, Silver Boy, and Deer-foot.**—Three claims, 1500x300 feet each; situated on the Dolores River, nine miles south of Rico; located in June, 1882; owners H. R. Goff, S. K. Nesbitt, and Thos. Hynes, all Rico; vein a fissure, eight feet wide, containing more or less free-milling gold and silver bearing quartz, assaying $12 per ton; developed by three open cuts with ten-foot faces each.

**Bluebird.**—(Extension of Luella); owners C. P. Mallett, Chattanooga, Dr. J. L. Tracy, and J. N. Dramer, both Durango; claim 300x1500 feet; situated on Flagler's fork of Junction Creek, twelve miles north-west of Durango, California district; located in February, 1883; vein a fissure, three feet wide, pay streak from six to twelve inches, containing gold and silver bearing quartz, assaying $100 per ton; developments—a twelve-foot shaft.

**Bonanza.**—300x1500 feet; situated on the east side of the Dolores River, twelve miles south of Rico, Snyder's Gulch district; located in September, 1882; owner Wm. H. Dawson, Rico; vein a fissure, forty inches wide, pay streak six inches, containing native copper, assaying forty per cent copper per ton, in a quartz gangue; developed by one open cut with a ten-foot face.

**Buckeye.**—300x1500 feet; situated on the east side of the Animas River, three miles north of Rockwood, Needle Mountain district; located in March, 1882; owners A. Johnson and N. G. Jarrard, both Chattanooga, and Allan Sayles and Henry Holz, both Durango; vein a fissure three feet wide, pay streak sixteen inches, containing copper pyrites, assaying $15 per ton, in a quartz gangue; developments— one ten-foot-face open cut.

**Bulldiago and Rough-and-Ready.**—Two claims, 300x1500 feet each; situated on the south-east slope of Mt. Valois, twenty-five miles east of north from Durango, Florida district; located in 1881; owners J. H. Pierce and J. W. Purslow, both Durango; veins both fissures, six feet wide each, with pay streaks twenty-two and ten inches wide, respectively, containing galena in a quartz gangue; developed by one thirty-foot drift.

**Bulldozer.**—300x1500 feet; situated on the south slope of Lewis Mountain, nine miles east of Parrott City, California district; located in 1879; owners Jno. Reid, Durango, J. R. Roberts, Parrott City, C. W. Burris, New Albuquerque, N. M., and R. B. Latham, Lincoln, Ills.; vein a fissure five feet wide, pay streak from twenty-four to thirty inches, containing galena and copper pyrites, assaying $100 per ton, but there is a streak of tellurium ore in the main mineral streak assaying about $200 per ton, with a quartz gangue-matter; developed by one thirty-foot shaft and one twenty-foot open cut.

**C. M. Reynolds and Old Fan.**—Two claims, 300x1500 feet each; situated on Flagler's fork of Junction Creek, and on the west side of Junction Creek, respectively, fifteen miles north-west of Durango, California



district; located in 1880; owners of the former the Mineral Wonder M. and M. Co. (see San Juan County) and O. M. Liddell, Denver, and of the latter the Mineral Wonder M. and M. Co., A. J. Reid, and A. Gorham, both Durango; veins both fissures, varying in width, and containing galena in a quartz gangue and gold-bearing quartz, respectively; developments—one open cut with a thirty-foot face on the first, and one open cut and tunnel twenty-five feet long, ten feet of which is under cover, on the last claim.

**Capital and Rattler.**—Two claims, 300x1500 feet each; situated two and one-half miles north of Rockwood, Needle Mountain district; located in February, 1882; A. Johnson and A. G. Jarrard, both Chattanooga, Robert Woods and G. Nabors, both Red Mountain Town, are owners in the first, and Allan Sayles and Henry Holz, both Durango, are owners in the last claim; veins both fissures, five feet wide each, pay streaks sixteen and ten inches wide, respectively, containing copper and iron pyrites with some native copper, assaying five per cent copper, one-half ounce gold, and fifty ounces silver per ton, in a quartz gangue; developments—one open cut forty feet long with a thirty-foot face on the former, and one open cut with a ten-foot face on the latter.

**Carboneria Coal and Coke Company (The).**—Incorporated under the laws of Colorado, January 1, 1883; capital stock $20,000, in 200 shares of $100 each, non-assessable; president, Jno. L. Pennington; secretary and treasurer, Frank C. Jackson; general manager, G. D. Jackson—all Durango; office Durango. This Company has a two years' (with privilege of five years) lease on the Durango Trust Company's coal land, forty acres; situated on the Animas River and D. & R. G. Railroad, two miles south of Durango; containing fourteen strata of bituminous coal, from one to six and one-half feet thick and aggregating seventy-five feet in thickness, and classified as first-class coking and domestic coal; dipping into the mountain at right angles with the surface ground, or at an angle of 45°, and covering 100 feet of the surface of the mountain, the other twenty-five feet being seams of slate and rock interspersed between the coal strata; developed by one main entry 150 feet long, beginning at the bottom of the mountain and cutting the fourteen different strata, on which stoping is done from the tunnel backwards, the principal work being done on the last or six-and-one-half-foot stratum, which contains only fifteen per cent of ash; there is a track in the main entry and also from the mouth of the main entry to a chute, by which the coal is dumped in the D. & R. G. R. R. Company's cars.

**Cascade Group.**—Seven claims, 300x1500 feet each; situated on the top and east slope of —— Mountain, two miles west of Castle Rock, Cascade district; located in 1880; owners the Dolores Valley Mining Company (see Dolores County); veins all fissures, from one to three feet wide, those on the top of the mountain containing galena, iron and copper pyrites, and quartz, and those on the east slope sulphurets of silver, galena, and quartz, assaying from fifty to seventy-five ounces silver per ton; developments—seven drifts from forty-two to sixty-five feet in length and one twenty-four-foot shaft.

**Central.**—300x1500 feet; situated on the west side of the Animas River, at Rockwood, Needle Mountain district; located in August, 1882; owner A. Johnson, Chattanooga; vein a fissure, five feet wide, containing four feet in width of hematite iron and copper pyrites in a quartz gangue, assaying $14.46 per ton in gold and silver; developments—one ten-foot face open cut.

**Crystal Light and Monitor Group.**—Five claims, 300x1500 feet each; situated on the Silver Mesa, twenty-five miles east of north from Durango, Florida district; located in 1881; veins all fissures, in the Crystal Light six feet wide, pay streak twenty inches, containing galena, assaying $167 per ton, in a quartz gangue; developed by one twenty-foot shaft; in the Mon-

itor six feet wide of quartz, carrying streaks of galena, assaying $40 per ton; developed by one eighteen-foot shaft; in the Little Fred five feet wide, containing thirteen inches of galena in a quartz gangue, assaying $60 per ton; developed by one eighteen-foot shaft; in the Little Emma four feet wide, pay streak fourteen inches, containing galena in a quartz gangue, assaying $35 per ton; developed by one twenty-fot shaft (Dawson Bros., Durango, are owners in this claim); in the Willoughby four feet wide, pay streak six inches, containing galena and eopper, in a quartz gangue; developed by one ten-foot-face cut; owner J. H. Pierce, Durango.

**Colonel Keim and Colonel Keim Extension.**—Two adjoining claims on the same vein, 300x1500 feet each; situated at Castle Rock Springs; located in 1881; owners Beverly R. Keim, Henry Schwenk, and Matt. Ebert, all Rico; vein a fissure four feet wide, pay streak twelve inches, containing galena, assaying twenty ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five feet long each.

**Colorado Springs Placer.**—160 acres; situated on the Dolores River, six miles south of Rico, Pioneer district; located in August, 1882; owners Leon and John Eggers, Wm. Davidson, F. W. Gove, H. F. Behrens, and J. B. Erhardt, all Rico, and C. O. French, New York City; developments—one shaft ten feet deep.

**Copper Age.**—300x1500 feet; situated at the head of Bed Rock Gulch and on the west side of the La Plata River, five miles north of Parrott City, California district, and in process of patent; owners Alfred A. Hard, Cleveland, O., C. C. Bowen and Schuyler Grant, both Detroit, Mich.; vein a fissure four feet wide, and a pay streak from six to thirty-six inches, probably averaging twenty inches in width, containing crystallyzed red oxide of copper, milling thirty per cent copper; developed by one 125-foot tunnel on the vein.

**Cora G.**—300x1500 feet; situated in La Plata Basin, eleven miles north of Parrott City, California district; located in 1879; owners R. E. Gaines, Durango, W. D. Wallace, Indianapolis, Ind., C. G. Ball, Lafayette, Ind., J. F. Arkerney, Des Moines, Ia., and Stuart Neff, Bryn Maer, Pa; vein a fissure four feet wide, pay streak from four to ten inches, containing ruby and brittle silver in a quartz gangue, assaying from 150 to 200 ounces silver per ton; developed by two shafts twenty-five and fifteen feet deep, respectively.

**Crystal Valley Group.**—Seven claims, 300x1500 feet each, viz.: Wisdom, Dud. Hersey, Sallie K., Stillwater, St. Paul, A. C. H., and Indiana; situated at the head of Crystal Valley, twenty-five miles north-east of Durango, Florida district; located in July, 1880; owner Geo. Wilkinson, Red Wing, Minn.; veins all fissures from one to six feet wide, with pay streaks from five to twenty inches, containing galena carrying gold, silver, and copper, assaying from $20 to $45 per ton, in a quartz gangue; developments—seven open cuts with twenty-foot faces each, one on each claim.

**Cyclone.**—(See Bell. Hamilton and Cyclone Mining and Milling Company.)

**Cuba.**—300x1500 feet; situated on Bear Creek, twelve miles north of Parrott City, California district; located in July, 1882; owners Bell Bros., Durango, and W. H. Andrews, Red Mountain City; vein probably a fissure, three feet wide, pay streak twenty inches, containing gold and silver bearing quartz; developed by one ten-foot-face cut.

**Cyclops Nos. 1 and 2.**—Two claims, 300x1500 feet each; situated on the west side of the Animas River, one mile south of Durango; located in



February, 1883; owners S. L. Moser, E. E. Fox, and Wm. Voyght, all Durango; containing a stratum of fire-clay, five feet thick, and pronounced by experts to be of an excellent quality for fire-brick, tiling, and other uses; developed by one thirty-foot tunnel.

**Century.**—(See Wallace Group.)

**Comstock.**—(See North Comstock and South Comstock.)

**Cumberland.**—(See Snow-Storm Gold and Silver Mining and Milling Company.)

**Daylight 61.**—300x1500 feet; situated in Silver Basin, five miles north of Parrott City, California district; located in October, 1882; owners Wesley Helm, Frank Cuhna, H. K. Machmer, and others, all Durango; vein a fissure twenty inches wide, pay streak from one to four inches, containing tellurium and free-gold quartz, assaying $300 per ton; developed by an open cut with a ten-foot-face.

**Devau Mining Company (The).**—Incorporated under the laws of New York, in 1880; paid-up capital stock $50,000, in 500 shares of $100 each, non-assessable; president, Moses E. Worthen; secretary and treasurer, Wm. P. Aldrich—both New York; manager, A. R. Lewis, Durango; office 17 Nassau street, New York, City and Durango, Colo.; owns one-third of the Amethyst (see Amethyst), one-half of the Eureka (see Eureka), one-third of the Ashland (see Ashland), Sylvan No. 2, and Ten Broeck, the west and east extensions, respectively, of the Ashland, 300x1500 feet each; located in 1879, and the former patented 1883; vein a fissure three feet wide, pay streak ten inches, containing an amalgam ore in a quartz gangue, milling, when sorted, $175 per ton; developed by an open cut and tunnel thirty-five feet long on the former, and two shafts twenty and ten feet deep on the latter; Lorillard No. 1, and Little Mack, 300x1500 feet each; situated on the Silver Basin slope of Lewis Mountain, nine miles north-east of Parrott, City, California district; located in 1879 and 1881, respectively, and patented in March 1883; veins both fissures, seven and two and a half feet, respectively, with pay streaks thirty and twelve inches wide of iron and ruby silver in a quartz gangue, in the former, assaying fifty ounces of silver per ton, and brittle silver in a quatz gangue in the latter, assaying from $150 to $200 per ton; developed by an open cut and tunnel thirty feet long and a shaft thirty feet deep, respectively; Bay City, 300x1500 feet; situated on the west side of the La Plata River, one mile north of Parrott City, California district; located in 1874, and patented in March, 1883; vein a horizontal contact, ten feet thick, containing iron and copper pyrites, assaying $8 per ton, in a quartz gangue; developed by one tunnel forty feet long and one fifteen-foot cut; Providence, 300x1500 feet; situated on the divide between Madden and Bed Rock Creeks, four miles north of Parrott City, California district; located in 1880; vein a fissure, two feet wide, containing galena and some iron, assaying $100 per ton, in a quartz gangue; developed by one fifteen-foot shaft and two ten-foot-face cuts; Parole, 300x1500 feet; situated on the Silver Basin slope of Lewis Mountain, nine miles north-east of Parrott City, California district; located in 1879, and patented in March, 1883; vein a fissure, four feet wide, pay streak eighteen inches, containing ruby silver and iron, assaying forty ounces silver per ton, in a quartz gangue; developed by one twenty-foot shaft; and an interest in the El Paso No. 2 (see El Paso No. 2), and also in the Little Jim and Silver Coin (see Little Jim and Silver Coin).

**Ding-Dong.**—300x1500 feet; situated near the head of the La Plata River, ten miles north of Parrott City, California district; located in October, 1881; owners Chas. Naegelin and E. E. Fox, both Durango, and others; vein a

fissure, two feet wide, pay streak six inches, containing ruby and brittle silver in quartz gangue, assaying forty ounces silver per ton; developed by one tunnel twenty feet long.

**Dolly Varden Group.**—Three claims adjoining on the same vein, 300x1500 feet each, viz.: Dolly Varden No. 1, Dolly Varden No. 2, and Eureka; situated in Vallecito Basin, twenty-five miles east of north from Durango, Needle Mountain district; located in September, 1877; owners Wm. Valiant and Luke Hunter, both Durango, and John W. Shaw and J. W. Dobbins, both Animas City; vein a fissure seven feet wide, containing quartz carrying galena, iron and copper pyrites, and gray copper, the galena streak, thirty inches wide, assaying from $25 to $65 per ton, the gray copper streak eighteen inches in width, assaying 250 ounces silver, and the iron and copper pyrites eighty-five ounces silver; developments—one twenty-six-foot shaft on the first, three shafts eleven feet deep each on the second, and one seventeen-foot-face cut and one thirty-foot tunnel on the third claim.

**Durango Coal Claim.**—160 acres; situated at the mouth of Lightner Creek, at Durango; located in September, 1882; owners John Larsh and C. P. Mallett, both Chattanooga; containing a number of strata of peacock-coal, from ten to sixty inches in thickness, and probably aggregating twenty feet of coal, interspersed with seams of sandstone and slate; developments—one entry twenty feet long and a wagon road to the property; assay tests showing only seven and one-half per cent ash in this coal, and it will coke 1,300 pounds of coke per ton.

**Durango Consolidated Coal and Coke Company (The).**—Incorporated under the laws of Colorado, March 10, 1883; capital stock $25,000 in 1,000 shares of $25 each, non-assessable; managers, S. L. Moser and J. H. Crist, both Durango; office Windom Block, Durango; owns four coal claims of 160 acres each, viz., Fairmount; situated in Horse Cañon, two miles east of Durango; located in April, 1880; containing four strata, six, three, nine, and five feet thick of bituminous coal, classified as fair coking and domestic coal; developments—one entry 220 feet long, 600 feet of drifting, 2,100 feet of tram-way, whims for hoisting, buildings, etc.; Ogden, situated on the east side of the Florida River, six miles north-east of Durango; located May, 1881; containing four strata of bituminous coal, two of which have been worked, three and two and one-half feet thick, and another four feet thick below, classified as a No. 1 coking-coal, the ash ranging from three to five per cent; developed by two entries, one on each vein, seventy-five feet long each, and $1,000 worth of buildings (there is a large bed of fire-clay underlying the second stratum on this claim); Peacock and Lightner Creek, situated in Wild Cat Cañon, three miles west of Durango; located in 1880 and 1881, respectively, and both in process of patent; containing three strata of bituminous coal, forty, forty-three, and fifty-five inches thick, respectively; classified in the former, where Peacock coal appears, as fair coking and domestic coal, and in the latter as first-class domestic coal; developed by one main entry 600 feet long.

**Egypt.**—300x1500 feet; situated at the head of Heffernan Gulch, fifteen miles north-west of Durango, California district; located in May, 1879; owners Geo. Wilkinson, Red Wing, Minn., G. W. Thomas, Denver, Gen. Geo. P. Buell, U. S. A., and H. L. Heck, Durango; vein a fissure three feet wide, pay streak from one to two inches, containing gold amalgam in a quartz gangue, assaying from $500 to $1,000 per ton; developments—one open cut with a twenty-five-foot face.

**Eighty-one and Antietam.**—Two claims, 300x1500 feet, each; situated at Castle Rock Springs, Cascade district; located in 1881; owners J. E. Carr and Henry Klingender, both Rico (Jno. Menard, Rico, is an owner in



the latter); veins both fissures thirty and twenty-five inches wide, respectively, with pay streaks twenty-four and ten inches wide, containing galena and yellow copper in a quartz gangue in the former, assaying $50 per ton, and galena, gray and yellow copper in the latter, assaying $65 per ton; developed by two shafts twenty feet deep each.

**Eldorado Placer.**—Sixty acres, situated on the Dolores River, six miles south of Rico, Snyder's Gulch district; located in August, 1882; owners W. B. Whiteside, D. C. Patterson, and M. Moran, all Rico; developed by one shaft twelve feet deep.

**Elizabeth.**—300x1500 feet; situated on the east side of the La Plata River, four miles north of Parrott City, California district; owner H. H. Brown, Parrott City; vein a fissure four feet wide, pay streak from twelve to twenty-four inches, milling from 100 to 440 ounces silver per ton; developed by one forty-foot shaft.

**El Paso No. 2.**—300x1500 feet; situated on the Junction Creek slope of Lewis Mountain, nine miles north-east of Parrott City, California district; located in 1880; owners the Devau Mining Company, John Reid, and J. W. Jackson, both Durango, R. B. Latham, Lincoln, Ills., and G. A. Jackson, Jackson, Mich.; vein a fissure two and one-half feet wide, pay streak ten inches, containing quartz carrying ruby silver, assaying $75 per ton; developed by one fifteen-foot shaft.

**Emma C.**—300x1500 feet; situated on the east side of the La Plata River, five and one-half miles north of Parrott City, California district; located in January, 1882; owners J. A. Amazeen, W. M. Walton, and A. L. Smith, all Parrott City; vein a fissure fifty inches wide, pay streak from sixteen to twenty-eight inches, containing quartz, assaying fifty ounces silver and a trace of gold per ton; developed by one twenty-five-foot tunnel.

**Erebus.**—300x1500 feet; situated in Burnt Timber Gulch, three miles north of Parrott City, California district; located in April, 1881; owners M. J. McCloskey and W. C. Davidson, both Durango, and James Stevenson, Parrott City; vein a fissure seven feet wide, containing quartz carrying pockets and streaks of galena with ruby and native silver, assaying $50 per ton; developed by one drift thirty feet long.

**Euclid No. 1, and No. 2, and Sylvanite.**—Three claims, 300x1500 feet each; situated on the west slope of Lewis Mountain, nine miles east of north from Parrott City, California district; located in 1879; owners John Reid and J. W. Jackson, both Durango, R. B. Latham, Lincoln, Ills., and Geo. A. Jackson, Jackson, Mich.; vein a fissure six feet wide, containing three feet in width of quartz, carrying ruby silver, tellurium, and galena, assaying from $60 to $250 per ton; developed by two tunnels forty and fifty feet long, respectively, and one twenty-foot shaft.

**Eureka.**—300x1500 feet; situated on the south slope of Lewis Mountain, nine miles north-east of Parrott City, California district; located in 1879, and patented in March, 1883; owners the Devau Mining Company, John Reid, and J. W. Jackson, both Durango, R. B. Latham, Lincoln, Ills., J. L. Lombard, Chicago, and Geo. A. Jackson, Jackson, Mich.; vein a fissure five feet wide, pay streak twenty inches, containing gold-bearing quartz with some galena and copper pyrites, assaying from $100 to $125 per ton; developed by an open cut and tunnel twenty-five feet long, and an open cut with a ten-foot face.

**Fairmount.**—(See Durango Consolidated Coal and Coke Company.)

**Friendship Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, Gen. J. J. Heffernan, Durango; vice-president, Maj. C. J. Dickey, U. S. A.; secretary, J. D. Patterson, Durango; treasurer, Capt. W. W. Dougherty, U. S. A.; superintendent, Robert Dickey, Durango; office Durango; owns the Twenty-second, Lancaster, Columbia, Friendship, and Monica, 300x1500 feet each; situated on the Silver Mesa, one-half mile north-west of Hewitt, Florida district; located in 1880; veins all fissures, from two to five feet wide, pay streaks from ten to twenty-five inches, containing galena, assaying thirty per cent lead and sixty ounces silver per ton, in a quartz gangue; developed by three shafts twenty-four feet deep each, and two open cuts with twenty-five and forty foot faces.

**Garfield.**—300x1500 feet; situated near the Silver Mesa, twenty-five miles east of north from Durango, Florida district; located in 1880; owner the Mineral Wonder Mining and Milling Company (see San Juan County); vein a fissure three feet wide, pay streak from ten to eighteen inches, containing galena, assaying seventy ounces silver per ton, in a quartz gangue; developed by one twenty-foot-face cut.

**Glorietta.**—300x1500 feet; situated on the east side of the La Plata River, seven miles north of Parrott City, California district; owners William O'Connell and J. A. Amazeen, both Parrott City; vein a fissure four feet wide, pay streak from eight to twelve inches, containing gold-bearing quartz, assaying from $100 to $200 per ton; developed by one twenty-five-foot open cut.

**Gold King and Swamp Angel.**—Two claims on the same vein, 300x1500 feet; situated on Flagler's fork of Junction Creek, fifteen miles north-west of Durango, California district; located in August, 1882; owners W. H. Wickline, Frank Brock, Wesley Helm and Frank Cuhna, all Durango, and others; (E. Galotti, Durango, is an owner in the former); vein a fissure four feet wide, containing free-milling gold quartz, yielding an average of $75 per ton; developed by two shafts thirty feet deep each, and one tunnel 250 feet long.

**Golden Era.**—300x1500 feet; situated on Carbonate Mesa and on Bear Creek, twelve miles north of Parrott City, California district; located in April, 1882; owners M. J. McCloskey and E. E. Fox, both Durango, and Edwin Ray, Animas City; vein a fissure thirty feet wide, containing mineralized quartzite, carrying carbonates of iron and copper, assaying from $15 to $20 per ton; developments—one open cut with a fifteen-foot face.

**Graden Coal Mine.**—120 acres; situated in Wild Cat Cañon, three miles west of Durango; located in January, 1882; owners T. C. Graden & Co. and W. H. Giles, both Durango; containing six strata of bituminous coal, only two of which are worked; 42 ann 66 inches thick; classified as fair coking and domestic coal; developed by one main entry 225 feet long, an air-shaft running parallel therewith and 200 feet of drifting; improvements—track in entry, cars, screens, bins, etc.; also one thirty-foot chute connecting mouth of entry with wagon road, and an entry is begun on the other stratum, and screens are being put in.

**Great Western.**—300x1500 feet; situated in Silver Lake Basin, ten miles north of Parrott City, California district; located in October, 1879; owners H. L. Wall, Durango, W. R. Neil, Alamosa, and Gen. Geo. P. Buell, U. S. A.; vein a fissure twenty feet wide, containing quartz carrying gold and silver with some amalgam ore, assaying from $35 to $40 per ton; developments—three open cuts with ten-foot faces each.



**Greencastle.**—300x1500 feet; situated one and one-half miles east of Castle Rock Springs, Cascade district; located in August, 1882; owners G.W. Hartman, Rico, and Daniel Manan, Castle Rock Springs; vein a fissure thirty inches wide, containing quartz carrying gold and silver, which assays $20 per ton; developed by one ten-foot shaft and one open cut and tunnel fifteen feet long.

**Henry Clay.**—(See Aurora Group.)

**Hidden Treasure.**—Placer 200 acres; situated on the Dolores River, six miles south of Rico, Snyder's Gulch district; located in June, 1882; owners H. E. Snyder & Sons; developed by one-half mile of ditching and fifty feet of fluming.

**Humboldt.**—300x1500 feet; situated on the Silver Mesa, twenty-five miles east of north from Durango, Florida district; located in August, 1879; owners Chas. and Wm. Naegelin, both Durango; vein a fissure five feet wide, pay streak from ten to sixteen inches, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by one shaft twenty-two feet deep.

**Independence.**—(Extension of Kennebec); 300x1500 feet; situated in Kennebec Gulch, thirteen and one-fourth miles north-west of Durango, California district; located in September, 1879; owners J. P. Wallace and Philo Ogden, both Animas City, and F. A. Foin, Durango; vein a fissure four feet wide, pay streak from ten to thirty inches, containing ruby and brittle silver in white quartz, assaying from $150 to $200 per ton; developed by two open cuts with fifteen-foot face each and one cross-cut tunnel thirty feet long.

**Jay Gould.**—300x1500 feet; situated on the west side of the Animas River, four miles north of Rockwood, Cascade district; located in May, 1880; owners Andrew Swan, Chattanooga, Isaac N. Covert, Durango, and Simeon Hendrickson, Farmington, N. M.; vein a fissure twelve feet wide, containing quartz carrying pockets of galena, assaying forty per cent lead and twenty ounces silver, and the quartz one ounce gold and twenty-five ounces silver per ton; developed by one open cut and tunnel thirty feet long, fifteen feet of which is under cover.

**Kennebec Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; capital stock $31,000, in 3,100 shares of $10 each, non-assessable; president, W. D. Wallace; treasurer, Brown Brockenbrough; secretary, Jno. D. Gougar—all Lafayette, Ind.; agent, J. P. Wallace, Animas City; office Lafayette, Ind., and Animas City; owns the Kennebec lode; situated in Kennebec Gulch, thirteen and one-fourth miles north-west of Durango, California district; located in July, 1879, and patented in May, 1883; vein a fissure four feet wide, pay streak from ten to thirty inches, containing ruby and brittle silver in a quartz gangue, assaying from $150 to $200 per ton; developed by one shaft ninety feet deep, one cross-cut 130 feet long, and one drift 115 feet long, connecting the tunnel with the bottom of the shaft.

**La Plata.**—300x1500 feet; situated near the head of the La Plata River, eleven miles north of Parrott City, California district; located in June, 1880; owners R. E. Gaines, F. A. Foin, and E. E. Fox, all Durango; vein a fissure four and one-half feet wide, containing two pay streaks seven inches wide each, composed of ruby and brittle silver in a quartz gangue, assaying $36 per ton; developments—one thirty-foot-face open cut.

**La Plata Chief.**—300x1500 feet; situated in La Plata Basin, eleven miles north of Parrott City, California district; owners T. Van Dibble, J. W. Kendall, Wm. De Baer, and others, all Parrott; vein a fissure forty inches

wide, pay streak from twelve to twenty-four inches, containing ruby silver in a quartz gangue, milling, when sorted, from 50 to 400 ounces silver per ton; developed by one thirty-foot tunnel.

**La Plata Reduction Works.**—Owned by Jno. T. Roberts, La Plata; situated on the La Plata River, three miles from Parrott City, containing complete and improved machinery for the treatment of free-milling ores, with the necessary motive power; capacity thirty tons per day (twenty-four hours).

**Late Discovery.**—300x1500 feet; situated on the La Plata River, four miles north of Parrott City, California district; located in December, 1880; owners J. P. Wallace and F. J. Will, both Animas City, E. E. Fox, D. L. Sheets, and Cliver Wright, all Durango; vein a fissure, fifteen feet wide, pay streak four feet, containing gold and silver bearing quartz, assaying from $150 to $175 per ton; developed by one shaft ten feet deep and one tunnel twenty feet long.

**Legal Tender.**—300x1500 feet; located in 1879; situated at the head of Lightner Creek, fourteen miles from Durango; owners J. S. Sheek, Parrott City, and P. O'Donnell, La Plata; vein a fissure three feet wide, containing galena, assaying from $50 to $125 per ton, in a quartz gangue; developed by one forty-foot tunnel.

**Lilly of the West.**—300x1500 feet; situated at the head of Heffernan Gulch, fifteen miles north-west of Durango, California district; located in May, 1879; owners Geo. Wilkinson, Red Wing, Minn., and others; vein a fissure, three feet wide, pay streak eleven inches, containing iron and copper pyrites, assaying from $20 to $25 per ton in a quartz gangue; developments—one tunnel fifteen feet long.

**Little Nell.**—(See Nina, Little Nell, etc.)

**Little Detective.**—300x1500 feet; situated on the east side of the Animas River, one-half mile east of Rockwood, Needle Mountain district; located in November, 1882; owners W. J. Reed and Chas. Miller, both Rock wood; vein a fissure eighteen inches wide, pay streak from two to three inches, containing gold quartz, assaying $50 per ton; developed by one twelve-foot-face cut.

**Little Emma.**—(See Crystal Light and Monitor Group.)

**Little Hero and Roman.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the La Plata River, ten miles north of Parrott City, California district; located in 1880; owners the Mineral Wonder Mining and Milling Company (see San Juan County) and others; vein a fissure five feet wide, pay streak eighteen inches, containing arsenical silver in a quartz gangue, assaying forty ounces silver per ton; developments—two open cuts with twenty-foot faces each, one on each claim.

**Little Jim and Silver Coin.**—Two claims, 300x1500 feet each; situated on the La Plata River slope of Lewis Mountain, nine miles north-east of Lewis Mountain; located in 1881; owners the Devau Mining Company and —— Salisbury, Durango; veins both fissures two feet wide each, pay streaks ten inches, containing quartz carrying ruby silver and gold, assaying $75 per ton; developed, respectively, by an open cut and tunnel thirty feet long and two shafts ten feet deep each.

**Lincoln Mining Company.**—(Unincorporated); composed of Geo. Butterbaugh, J. W. Graham, and D. B. Graham, all Denver, and Philip



Wixson, Lexington, Mich.; owns the Lincoln Group, comprising eleven claims, 300x1500 feet each, viz., Lincoln, Lincoln No. 2, Lincoln No. 3, Lincoln No. 4, Wabash, and Lucky Boy, patented, and the Alice, Denver, Durango, Hidden Treasure, and Washington, unpatented; all located in 1880-81; situated at the head of Ramsey Gulch, and on the east fork of Mt. Valois, one mile north-east of Hewitt, and twenty-five miles from Durango, Florida district; the developments consisting of shafts, adits, tunnels, and cross-cuts, aggregating about 560 feet, or about thirty feet of work on each claim, except the Lincoln, on which there is a ninety-foot tunnel on the vein, the floor of which is eighty feet from the surface, with a cross-cut twenty-four feet long, showing in the face of the tunnel eight feet of mineral, a second tunnel, 300 feet below the first, 150 feet long, also on the vein, the last 100 feet of which is in mineral the full width of the tunnel; these workings show a vertical fissure vein forty feet wide, in silurian quartzite, with a pay streak from five to eight feet, containing galena and gray copper, with bismuth, silver, sulphate of silver, mispickel and iron pyrites, in a quartz gangue, an average of twenty-one assays showing $192 per ton, and in the other claims pay streaks from ten to twenty-five inches, containing similar ore; and thirty-six acres of coal land, situated about four and one-half miles from Durango, and one and one-half miles from the D. & R. G. R'y, containing three strata of bituminous and coking coal, forty feet each in thickness, with forty feet of country rock between the upper and middle strata, and sixty feet between the middle and lower; developments—one entry 100 feet long on the lower vein, with some drifting; output about 2,000 tons.

**Lucina.**—300x1500 feet; situated on the divide between Junction Creek and the La Plata River, eleven miles north of Parrott City, California district; located in 1879; owners Robert Douglass, Indianapolis, J. P. Wallace, Animas City, John M. Trew, E. E. Fox, O. J. Panie, all Durango, and others; vein a fissure three feet wide, pay streak from two to five inches, containing ruby and brittle silver in a quartz gangue, assaying $150 per ton; developed by one shaft thirty-five feet deep and one twenty-foot-level.

**Luella.**—300x1500 feet; situated at the head of Flagler's fork of Junction Creek, fifteen miles north-west of Durango, California district; located in 1881; owners J. N. and C. W. Dramer and Dr. J. L. Tracy, all Durango; vein a fissure three feet wide, pay streak twenty inches, containing ruby and brittle silver in a quartz gangue, carrying gold, which mills, when sorted, an average of $242 per ton, and some of the ore much higher; developed by two shafts thirty-two and eigty feet deep, respectively, and a drift twenty feet long from the latter, at a depth of seventy feet.

**Major D. L.**—300x1500 feet; situated on the west fork of Ruby Gulch, fifteen miles north-west of Durango, California district; located in May, 1879, and patented in March, 1883; owner Geo. Wilkinson, Red Wing, Minn.; vein a fissure from three to four feet wide, pay streak from six to ten inches, containing gold amalgam in a quartz gangue, assaying $800 per ton, the mineral appearing in horses, some portions of the vein being barren; developed by one tunnel sixty feet long and one shaft forty feet deep.

**Mammoth.**—300x1500 feet; situated at the head of Heffernan Gulch, fifteen miles north-west of Durango, California district; located in May, 1879; owners C. B. Shaw, Durango, and Geo. Wilkinson, Red Wing, Minn., and ——— Moore, Los Angeles, Cal.; vein a fissure, three feet wide, pay streak from six to ten inches, containing grey copper in a quartz gangue, carrying gold and silver, assaying from $125 to $200 per ton; developed by one open cut and tunnel twenty-five feet long, ten feet of which is under cover.

**Mastodon.**—(See Wilkinson Group.)

**Mineral Wonder.**—300x1500 feet; situated on Junction Creek, fourteen miles north-west of Durango, California district; located in 1880; owners C. L. Petherbridge and W. J. Wilson, both Durango, and the estate of Geo Ruble, Denver; vein a fissure, ten feet wide, pay streak from three to five inches of free-milling gold quartz, yielding $250 per ton; developed by two tunnels 132 and 50 feet long, respectively.

**Monitor.**—(See Crystal Light and Monitor Group.)

**Monitor.**—300x1500 feet; situated at the head of the La Plata River, eleven miles north of Parrott City, California district; located in October, 1879, and in process of patent; owner F. A. Foin, Durango; vein a fissure, four feet wide, pay streak from eight to ten inches, containing ruby and brittle silver, in a quartz gangue, which mills, when sorted, from $175 to $200 per ton; developed by two tunnels 130 and 50 feet long respectively.

**Monitor and Little Emma.**—Two claims, 300x1500 feet each; situated on the Silver Mesa, twenty-five miles east of north from Durango, Florida district; located in April 1881; owners P. H. Weller, J. H. Pierce, and W. H. Dawson, all Durango; veins both fissures, two and one-half to three feet wide, respectively, with pay streaks seven to ten inches wide, containing galena with copper, assaying $50 per ton, in a quartz gangue; developed by two shafts twenty-two and fifty feet on each claim, respectively.

**Maggie.**—300x1500 feet; situated in Deadwood Gulch, two and one-half miles east of Parrott City, California district; owners M. Brennan, Parrott City; D. W. Tigue, M. McGee, and W. Johnson, all Durango; vein a fissure four feet wide, pay streak from eight to twelve inches, containing gold-bearing quartz, assaying from $50 to $250 per ton; developed by one twenty-foot cut.

**Manhattan.**—300x1500 feet; situated in Tibercio Gulch, and on the east side of the La Plata River, California district; located in 1877; owner W. S. Darrow, Parrott City: vein a fissure from ten to twenty inches wide, containing iron pyrites in a quartz gangue, milling, when sorted, $45 per ton; developed by one 110-foot tunnel and one thirty-five-foot cross-cut.

**Moore and Emery and Raleigh.**—Two claims, 300x1500 feet each; situated in Bowen's Gulch, two miles west of La Plate City, California district; located in August, 1881; owners C. W. Cornell, L. C. and L. R. Tilghman, all Durango; veins both fissures two and three feet wide, respectively, with pay streaks twelve and twenty inches wide, containing galena, assaying twenty-five per cent lead and thirty-five ounces silver per ton, in a quartz gangue; developed by one fifteen-foot shaft on the former and one twenty-five-foot-face cut on the latter.

**Morovoratz.**—(See North Morovoratz and South Morovoratz.)

**Mountain Queen.**—300x1500 feet; situated on the divide between Ruby Gulch and Silver Lake Basin, eleven miles north of Parrott City, California district; located in 1879; owners H. L. Wall and Wm. M. Wright, both Durango, and A. J. Moore, San Francisco; vein a fissure twelve feet wide, pay streak from ten to fourteen inches, containing gold and silver bearing quartz, assaying from 150 to 200 ounces silver per ton; developed by one thirty-foot tunnel.

**Mountaineer.**—300x1500 feet; situated at the head of Flagler's fork, on the divide between Junction Creek and the Hermosa River, eighteen miles west of Durango, California district; located in April, 1881; owners L. C. Tilghman, C. W. Cornell, and H. C. Hansen, all Durango, and W. S. Odell,



Washington; vein a fissure, with a pay streak twelve inches wide, containing free-milling gold quartz, assaying $40 per ton; developed by one cross-cut tunnel twenty-five feet long.

**New Comet, Wester, and Petzite.**—Three claims 300x1500 feet each; situated on Junction Creek, fourteen miles from Durango, California district; located in July, 1881; owners W. C. Davidson, Durango, James Austin and C. A. Hoffmann, both Trenton, Mo.; veins both fissures from twelve to twenty-four inches wide, containing gold and silver-bearing quartz, assaying $50 per ton; developments—three shafts 15 feet deep each.

**Nina, Little Nell, Estate, Bodie, and Rough-and-Tumble.**—Five claims, 300x1500 feet each; situated on the west bank of the Animas River, three miles south of Durango; located in February, 1883; owners W. H. Bodenhamer, C. L. Creek, and J. J. Fisher, all Durango; containing a stratum or vein of magnetic and hermatite iron, at least eight feet thick and 7,500 feet in length, and where tested, by assay, shows from twenty-five to thirty per cent iron and $6 in gold and silver per ton; developments—five shafts, one on each lode, from twelve to twenty-five feet in depth.

**Nora.**—300x1500 feet; situated at the head of Bear Creek, twelve miles north of Parrott City; located in June, 1882; owners J. C. Langley, Durango, and John W. Morse, Animas City; vein a fissure seven feet wide, pay streak from six to twelve inches, containing horn-silver, in a quartzite and porphyry gangue, assaying $500 per ton; developed by one thirty-foot open cut and one ten-foot shaft.

**North Comstock.**—300x1500 feet; situated on the west bank of the La Plata River, three and one-half miles north of Parrott City; located in June, 1874; owners A. Root, Parrott City, Christian Wall, Chicago, and T. Parrott, San Francisco; vein a fissure four feet wide, pay streak fifteen inches, containing galena, gray copper, and iron and copper pyrites in a quartz gangue, carrying gold, milling, when sorted, $75 per ton; developed by one shaft 150 feet deep, one tunnel thirty-five feet long and two drifts twenty-five and forty feet long, respectively.

**North Morovoratz.**—300x1500 feet; situated at the mouth of the western wall of La Plata Cañon, one and one-half miles north of Parrott City, California district; located in May, 1876; owners C. L. Petherbridge, Durango; J. S. Putnam, Parrott City, Wm. H. Evick, Chattanooga, and W. Beaumont, Denver; vein a fissure six feet wide, pay streak from twenty-four to thirty inches, containing galena, gray copper, and iron and copper pyrites in a quartz gangue, milling when sorted, from $150 to $200 per ton; developed by one shaft fifty-five feet deep.

**Ogden.**—(See Durango Consolidated Coal and Coke Company.)

**Ohio.**—300x1500 feet; situated on the Silver Mesa, twenty-five miles east of north from Durango, Florida district; located in 1880; owners Peter Fassbinder and Chas. Seiner, both Durango; vein a fissure six feet wide, pay streak from three to four feet, containing free-milling gold quartz, assaying from $50 to $60 per ton; developed by one eighteen-foot shaft.

**Otto D.**—(Extension of Luella); 273x300 feet; situated at the head of Flagler's fork of Junction Creek, fifteen miles from Durango; owners T. P. Lindsay, A. E. Martin, and Emma Dramer, all Durango; vein a fissure, with similar characteristics to the Luella; developed by one forty-foot open cut and one nineteen-foot shaft.

**Ouray Mining and Discovery Company.**—(See Lake County); owns a one-half interest in the Hudson lode, 300x1500 feet; situated at the head of Johnson's Fork of the Vallecito, twenty-five miles from Durango; located in August, 1878; vein a fissure, varying in width, and containing a very fair material; developments—assessment work.

**Peacock.**—(See Durango Consolidated Coal and Coke Company.)

**Pembroke Mining Company (The).**—Incorporated under the laws of Indiana, January 21, 1882; capital stock $300,000, in 6,000 shares of $50 each, non-assessable; president, Daniel W. Grubbs; vice-president, W. H. Thomas; secretary, B. C. Wright; treasurer, W. H. Schmidt—all Indianapolis, Ind.; manager, J. R. Shoemaker, Durango; offices Indianapolis and Durango; owns five claims, 300x1500 feet each, viz.: North Star, Pittsburgh, Summit, Pembroke, and Iron; situated on the East Fork of the Florida River, twenty-five miles east of north from Durango, Florida district; located from June to November, 1881; veins all fissures, from two to five feet in width, pay streaks from ten to thirty inches, containing galena in a quartz gangue carrying gold, silver, and copper, assaying from fifteen to twenty-one per cent lead, forty ounces silver, and $5 in gold per ton; developments—on North Star one twelve-foot-face cut and one ten-foot shaft, on Pittsburgh one eighteen-foot shaft and one ten-foot-face cut, on Summit one open cut and tunnel twenty-five feet long and one ten-foot-face cut, on Pembroke one twenty-five-foot shaft, and on Iron one ten-foot-face cut.

**Penobscot.**—300x1500 feet; situated in Kennebec Gulch, thirteen and one-half miles north-west of Durango, California district; located in October, 1879; owners Wm. and Frank Keough and Edward Hendricks, all Durango; vein a fissure five feet wide, pay streak from eight to twelve inches, containing gold and silver bearing quartz, assaying from $12 to $50 per ton; developed by one thirty-five-foot open cut with a twenty-foot face.

**Perin Coal Bank.**—Eighty acres; situated between Lightner and Junction Creek, two miles west of Durango, California district; located in March, 1882; owner C. M. Perin, Durango; containing three strata of bituminous coal, five, three and one-half, and two feet thick, classified as first-class coking and domestic coal, tests showing only seven per cent ash, above which is a two-foot vein of hematite iron, assaying thirty per cent iron and six ounces silver per ton.

**Rattler.**—(See Capital and Rattler.)

**Red Cloud and Little La Plata.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the east side of the La Plata River, one mile north of Parrott City, California district; located in 1876, and in process of patent; owner Christian Wahl, Chicago; vein a fissure three feet wide, containing galena and copper pyrites, assaying sixty ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut and a twenty-foot shaft from the end of the cut and another shaft twenty feet deep.

**Riverside.**—250x1500 feet; situated on the La Plata River, parallel to the Wide West; located March 1, 1881; owner T. E. Smith, Parrott City; vein a fissure forty inches wide, pay streak from six to twelve inches, containing galena, gray copper, and black oxide of copper, assaying from $50 to $100 per ton, in a quartz gangue; developments—assessment work.

**Rough-and-Ready.**—(See Bulldiago and Rough-and-Ready.)



**Ruby.**—300x1500 feet; situated on the divide between Junction Creek and the La Plata River, fifteen miles north-west of Durango, California district; located in 1877, and in process of patent; owner W. J. Wilson, Durango; vein a fissure twelve feet wide, pay streak from ten to twenty inches, containing tellurium and amalgam quartz carrying ruby and brittle silver and some free gold, the mineral appearing in narrow streaks, milling, when sorted, $250 per ton; developed by one shaft thirty-three feet deep, and one tunnel eight feet long, running from the shaft.

**Ruby King.**—300x1500 feet; situated on Flagler's fork of Junction Creek, fifteen miles north-west of Durango, California district; located in September, 1879, and patented in February, 1883; owners Charles M. Hilliker, H. Bartholomew, Charles Newman, and John Huff, all Durango; vein a fissure three and one-half feet wide, pay streak from six to twenty-two inches, containing ruby and brittle silver, in a quartz gangue, assaying from 100 to 125 ounces silver per ton; developed by one tunnel ninety-three feet long and one shaft twenty-six feet deep.

**Ruby Queen and Stambould.**—Two adjoining claims on the same vein, 300x1500 feet each; situated at the head of Flagler's Fork of Junction Creek, fifteen miles north-west of Durango, California district; located in 1881; owners Wm. Bagley, Durango, and others; vein a fissure four feet wide, pay streak from three to five inches, containing galena, gray copper, with some ruby and brittle silver, in a quartz gangue, milling, when sorted, $150 per ton; developed by one tunnel 100 feet long.

**Sailor Boy.**—(See Big Giant, Sailor Boy, and Deer-foot.)

**San Juan.**—300x1500 feet; situated in Wall's Gulch, fifteen miles north-west of Durango; located in 1881; owners Wm. Windom, Winona, Minn., W. A. Bennett and W. S. Weightman, both Durango; vein a fissure five feet wide, pay streak from twenty to twenty-four inches, containing free-milling gold quartz, yielding $75 per ton ($60 gold and $15 silver); developed by two open cuts thirty-five and twenty-five feet long.

**San Juan and New York Mining and Smelting Company (The).**—Incorporated under the laws of New York in the winter of 1879-80; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, H. Amy, New York; vice-president, W. A. Bell, Colorado Springs; secretary, Geo. F. Peabody; treasurer, Spencer Trask—both New York; general manager, J. A. Porter, Durango; office 70 Broadway, New York City, and Durango, Colo.; owns a smelting-works, situated at Durango, which have been in continuous operation since November, 1882; containing improved crusher and rolls, four roasting-furnaces, and two blast-furnaces, with all other necessary machinery and switch facilities; motive power supplied by a sixty-horse-power engine, with ample boilers; capacity forty tons per day (twenty-four hours); and the Aspen Group (See San Juan County).

**Santa Maria.**—300x1500 feet; situated in Crystal Valley, at Hewitt, Florida district; located in 1879, and in process of patent; owner Mrs. J J. Heffernan, Durango; vein a fissure seven feet wide, pay streak from twenty-five to thirty inches, containing galena with some ruby, wire, and native silver, and copper, assaying forty per cent lead, seventy-five ounces silver, and some gold per ton, in a quartz gangue; developed by two fifteen-foot shafts and one open cut eighty feet long, with an eighteen-foot face.

**Silver Basin, Jeanette, and Milwaukee.**—Three adjoining claims on the same vein, 300x1500 feet each; situated in Silver Lake

Basin, ten miles north of Parrott City, California district; located in March, 1882; owners J. A. Amazeen, W. F. Ordway, and J. W. McKibbon, all Parrott City; vein a fissure from two to four feet wide, pay streak from two to six inches, containing gold and silver bearing quartz, assaying from $50 to $150 per ton; developed by three open cuts with ten-foot faces, one on each claim.

**Silver Eagle.**—(Extension of Legal Tender); 300x1500 feet; owners W. A. Bennett, Durango, and J. S. Sheek, Parrott City; vein a fissure, with characteristics similar to the Legal Tender.

**Silver Mesa Mining Company (The).**—Incorporated under the laws of West Virginia, in June, 1882; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, Gen. J. D. Rice, Washington; general manager, W. A. Bennett, Durango; directors, the same, with Ex-Secretary Wm. Windom, Minnesota, U. S. Senator Sabin, Minnesota, U. S. Senator H. W. Blair, New Hampshire, and Geo. W. Hatch, Boston; office Durango; owns thirty claims, 300x1500 feet each; situated at the head of the Lake or east Fork of the Florida River, twenty-five miles east of north from Durango, Needle Mountain district; located from 1877 to 1882, viz., the Northern Aurora and Southern Aurora, two adjoining claims on same vein (a fissure), five feet wide, pay streak from twenty-four to thirty inches, containing galena, gray and yellow copper, assaying $200 per ton, in a quartz gangue; developed by one sixty-foot tunnel and one thirty-two-foot open cut, respectively, on each claim; Wood, Chief of the Needles, Champlain, and Longfellow, four adjoining claims on the same vein (a fissure), from three to nine feet wide, containing galena, gray and yellow copper in a quartz gangue, milling, when sorted, in each claim, respectively, $50, $35, $250, and $50 per ton; developed by two shafts twenty-four and thirty-two feet deep on the Wood, one shaft twenty-five feet deep and two open cuts with fifteen-foot faces each on the Chief of the Needles, one tunnel sixty feet long on the Champlain, and one tunnel 110 feet long on the Longfellow; Buell vein a fissure three and one-half feet wide, pay streak six inches, assaying $200 per ton; developed by one fifteen-foot cut and one twenty-foot shaft; Belcher vein a fissure three and one-half feet wide, pay streak ten inches, assaying twenty per cent lead and forty ounces silver per ton; developed by one thirty-foot cut and one thirty-foot shaft at end of cut; and twenty-two other claims (all full), on which the Company is doing development work, and all of which are showing fairly, the veins all carrying gold in varying quantities.

**Silver Needle and Sitting Bull.**—Two claims, 300x1500 feet each; situated on the south slope of Florida Mountain, twenty-five miles east of north from Durango, Vallecito district; located in July, 1880; owners Andrew Swan, Chattanooga, and A. J. Phillips, Durango; veins both fissures, three and one-half feet wide each, pay streaks fifteen and ten inches wide, respectively, containing galena with iron and copper pyrites in a quartz gangue, assaying thirty ounces silver in the former and eight ounces silver in the latter claim per ton; developed by two cuts with ten and fifteen foot faces on the first and one twelve-foot-face cut on the last.

**Silver Star.**—300x1500feet; situated in Neptune Gulch, five and one-half miles from Parrott City, California district; located in June, 1883; owners T. P. Lindsay and J. L. Tracy, both Durango, and B. M. Hampton and Jno. W. Bosserman, both La Plata; vein a fissure, five feet wide, pay streak from twenty to thirty-six inches, containing galena and iron, assaying from $10 to $100 per ton, in a quartz gangue; developed by one fifteen-foot open cut.

**Snow Line.**—(Extension of La Plata Chief); 300x1500 feet; located in 1880; owners T. Van Dibble and J. W. Kendall, both Parrott City; vein a fissure, with characteristics similar to the La Plata Chief.



**Snow-storm Gold and Silver Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in April, 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, E. G. Cornelius; vice-president, Levi Ritter; secretary, Chas. A. Ludlow—all Indianapolis, Ind.; treasurer and manager, J. E. Downey, Durango; office Durango, Colo., and 66 East Market street, Indianapolis, Ind.; owns nine claims, 300x1500 feet each; situated on and adjacent to Morse's Peak, fifteen miles north-west of Durango, California district; located in 1879; veins all fissures, as follows: in Snow-storm five feet wide, containing quartz carrying gold and silver; developed by three tunnels, 176, 20, and 20 feet long; in the Cumberland over 100 feet wide at the outcrop, containing two pay streaks, one on each wall, ten feet wide each, containing gold and silver bearing quartz, on which a mill-run of fourteen tons of sorted ore, made at the Argo Smelter netted the Company $824, after deducting the cost of treatment, shipping, mining, etc.; developed by one tunnel sixty feet long and two shafts twenty feet deep each, all in mineral; in the North Star probably thirty feet wide, containing gold quartz carrying a quicksilver amalgam ore, on which some very high assays have been obtained; in the Lady Douglass, which crosses the other veins, six feet wide, containing four feet in width of native quicksilver and cinnabar ore, tests made within two feet of the surface showing seventy-one per cent of pure quicksilver; developed by one twelve-foot drift; in the Muldoon (extension of Cumberland), one-third of which is owned by J. W. Morse, Animas City, six feet wide, containing gold and silver bearing quartz; developed by one fifty-foot tunnel; and on the Morning Star, Rebecca, Ray, and Martha the Company has done the assessment work.

Also owns a Ten-stamp mill, situated on Junction Creek, twelve miles north-west of Durango; building 40x60 feet, containing Frue Concentrator, settlers, amalgamating pans, Battery, Blake Crusher, etc., motive power supplied by a twelve-inch Leffel Wheel; and it is the intention of the Company to put in a roasting (chloridizing) furnace during the present season.

**South Comstock.**—300x1500 feet; situated on the west bank of the La Plata River, three and one-half miles north of Parrott City, California district; located in June, 1874, and patented in 1877; owners John Reid, Durango, and T. J. McCluer, Florida; vein a fissure four feet wide, pay streak fifteen inches, containing galena, gray copper, iron and copper pyrites in a quartz gangue, carrying gold, milling, when sorted, $75 per ton; developed by one shaft 165 feet deep and one cut thirty-five feet long.

**South Morovoratz.**—300x1500 feet; situated at the mouth of the western wall of La Plata Cañon, one and a half miles north of Parrott City, California district; located in May, 1876, and patented in 1877; owners John Reid, Durango, and T. C. McCluer, Florida; vein a fissure six feet wide, pay streak from twenty-four to thirty inches, containing galena, gray copper, and iron and copper pyrites, in a quartz gangue, milling, when sorted, from 150 to 200 ounces silver and some gold per ton; developed by one shaft thirty feet deep.

**Stambould.**—(See Ruby Queen and Stambould.)

**Sultana.**—300x1500 feet; situated on the east side of Morse's Peak, eleven miles north of Parrott City, California district; located in October, 1879; owners John M. Trew, O. J. Paine, and O. F. Boyle, all Durango; vein a fissure from two to three feet wide, pay streak from three to four inches, containing gold-bearing quartz, carrying ruby silver and silver glance, assaying from 150 to 200 ounces silver per ton; developed by one thirty-five-foot drift.

**Summit.**—300x1500 feet; situated on Bear Creek, twelve miles north of Parrott City, California district; located in July, 1882; owners Weddington

& Bell, Durango, and W. H. Andrews, Red Mountain City; vein a fissure four feet wide, containing gold-bearing quartz, assaying $15 per ton; developed by one ten-foot-face cut.

**Summit.**—300x1500 feet; situated in Wall's Gulch and on the divide between Junction and Lightner Creeks, fifteen miles north-west of Durango, California district; located in July, 1879; owners W. A. Bennett, Durango, and Wm. Windom, Winona, Minn.; vein a fissure four feet wide, pay streak twelve inches, containing galena and copper pyrites, assaying $55 in silver and some gold per ton, in a quartz gangue; developments—two open cuts with fifteen and twenty-five foot faces, and one twenty-foot cross-cut tunnel.

**Sylvanite.**—(See Euclid No. 1 and No. 2 and Sylvanite.)

**Swamp Angel.**—(See Gold King and Swamp Angel.)

**Tempest Mining Company.**—Incorporated under the laws of Colorado, in 1881; capital stock 1,000,000, in 100,000 shares of $10 each, non-assessable; president, Gen. David S. Stanley, U. S. A.; vice-president, Gen. J. J. Heffernan, Durango; treasurer, Capt. W. A. Dougherty, U. S. A.; secretary, J. D. Patterson, Durango; owns fourteen claims, 300x1500 feet each; situated in the center of Crystal Valley, at Hewitt, Florida district; located in 1880; veins all fissures from one to six feet in width, containing galena in a quartz gangue, carrying gold, silver, and copper, assaying forty per cent lead, seventy ounces silver, and some gold per ton; developments—on the Tempest an open cut sixty feet long, with a twenty-one-foot face, on the Casey two shafts ten and twenty-five feet deep, on the Stanley one twenty-four-foot shaft, on the Economy one tunnel 125 feet long, on the Deputy an open cut thirty feet long, with a fifteen-foot face, on the Morton a thirty-foot open cut, with a fifteen-foot face, on the Knickerbocker one thirty-foot shaft, on the Hancock one twenty-four-foot shaft, on the Bertie one twenty-four-foot shaft, on the Lavalette one twenty-four-foot shaft, on the Anna two twelve-foot shafts, on the Notre Dame one twenty-four-foot shaft, and on the Shin Fane by a thirty-foot cut with a fifteen-foot face.

**Ten Broeck.**—(See Devau Mining Company.)

**Tennessee No. 1.**—300x1500 feet; situated on Mount Valois, twenty-five miles east of north from Durango, Florida district; located in 1880; owners J. R. Shoemaker, Durango, and J. C. Craig, Martinsville, Ind.; vein a fissure eight feet wide, pay streak from fifteen to twenty inches, containing galena, in a quartz gangue, carrying gold, silver, and copper, assaying from $50 to $60 per ton; developed by one eighteen-foot shaft and one ten-foot-face cut.

**Terrible.**—(See Bear Creek Gold and Silver Mining Company.)

**Texas Ranger.**—300x1500 feet; situated in Vallecito Basin, twenty-five miles east of north from Durango, Vallecito district; located in June, 1879; owner Andrew Swan, Chattanooga; vein a fissure, five feet wide, pay streak twenty-six inches, containing iron and copper pyrites and galena, assaying 800 ounces silver per ton, in a quartz gangue; developed by one shaft twenty-six feet deep.

**Tippecanoe Mining, Milling, and Lumber Company (The).**—Incorporated under the laws of Colorado, April 28, 1882; capital stock $100,000, in 2,000 shares of $50 each, non-assessable; president, Elmer A. Wixson; secretary and treasurer, Herbert E. Pack; general manager, Solon W. Pingrey—all Durango; office Durango; owns the Tippecanoe lode, 300x1500 feet; situated in La Plata Basin, eleven miles north of Parrott City,



California district; located in July, 1879, and in process of patent; vein a fissure three feet wide, pay streak from four to ten inches, containing ruby and brittle silver in a quartz gangue, milling, when sorted, from 175 to 200 ounces silver and some gold per ton; developed by one drift 450 feet long, connected with the surface by three upraises, thirty, forty, and fifty feet long, respectively, with some other workings.

**Tomahawk.**—300x1500 feet; situated in Basin Gulch, seven miles north of Parrott City, California district; located in 1881; owners E. D. Morgan and Thos. Ellis, both Durango, and Noyes, Stark & Cross, Denver; vein a fissure three feet wide, containing quartz carrying tellurium, assaying $35 per ton; developed by two open cuts with ten-foot faces each.

**Tribune.**—300x1500 feet; situated on the west side of the La Plata River, three and one-fourth miles north of Parrott City, California district; located in 1880; owners Jno. Reid and J. W. Jackson, both Durango, R. B. Latham, Lincoln, Ills., Geo. A. Jackson, Jackson, Mich., Samuel Grey, Gunshot, Arizona, and A. R. Petrie, New Mexico; vein a fissure three feet wide, pay streak from twelve to twenty-four inches, containing heavy galena, assaying $75 per ton, in a quartz gangue; developed by one ten-foot shaft and one eighty-foot cross-cut.

**Twenty-second.**—(See Friendship Mining Company.)

**Valentine.**—300x1500 feet; situated in Burnt Timber Gulch, two and one-half miles north of Parrott City, California district; located in February, 1881; owners J. A. Amazeen, U. S. Ludwig, Giles Kinney, and Wm. O'Connel, all Parrott City; vein a fissure fifty inches wide, pay streak from seven to fourteen inches, containing gold-bearing quartz, assaying $150 per ton; developed by one twenty-foot tunnel.

**Vanderbilt and Gracie Bell.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on Flagler's fork of Junction Creek, fifteen miles north-west of Durango, California district; located in 1882; owners David C. Wood, Geo. Taylor, and others, all Durango; vein a fissure four feet wide, containing free-milling gold quartz, assaying $60 per ton; developed by one tunnel 225 feet long on the former and one shaft twenty feet deep on the latter.

**Virginia.**—300x1500 feet; situated in Virginia Basin, fifteen miles north-west of Durango, California district; located in June, 1880; owners L. C. and L. R. Tilghman, C. W. Cornell, and H. C. Hansen, all Durango; vein a fissure four feet wide, containing streaks of a free-milling gold quartz ore, assaying $60 per ton; developed by one level thirty feet long.

**Wallace Group.**—Eleven claims, 300x1500 feet each; situated at head of Bear Creek, twelve miles north of Parrott City, California district, viz., Century, located in 1881, and patented in 1882; vein a fissure, four and one-half feet wide, pay streak twelve inches, containing free-milling gold quartz, milling $376 per ton; developed by three drifts, 75, 76, and 85 feet long, and one shaft forty-five feet deep, with which all the drifts connect; output forty-six tons, with 150 tons in sight; Cæsar, located in August, 1881, Great Falls, located in July, 1880, Hoosier (extension of Century), located in September, 1881, Romulus, located in August, 1881, Wabash, located in July, 1880, Cincinnatus, located in August, 1881, Jefferson, located in August, 1880, La Fayette, located in July, 1880, Quiz, located in July, 1880, Sherbrooke, located in July, 1880; veins all fissures, from three to seven feet wide, with pay streaks from ten to twenty inches, containing gold-bearing quartz, carrying iron pyrites, except in the Jefferson, La Fayette, and Wabash, which are somewhat wider, and in

which the ore mills $75 per ton, while in the others an average of $60 per ton, some of it being quite high grade and some low; developments—one open cut and tunnel on each claim from fifteen to thirty-five feet in length; owner J. P. Wallace, Animas City; (A. S. Hurd, Sherbrooke, Canada, is an owner in the Jefferson, La Fayette, and Sherbrooke).

**Wap.**—300x1500 feet; situated on Silver Mountain, near the source of the La Plate River, twenty miles north-west of Durango, California district; located in June, 1879; owners Wm. Windom, Winona, Minn., W. A. Bennett, Durango, and Thos. Van Dibble, Parrott City; vein a fissure, four feet wide, pay streak four inches, containing galena and gray copper, with ruby silver and iron pyrites, in a quartz gangue, milling, when sorted, from $150 to $200 per ton; developed by one twenty-five-foot open cut and one twenty-five-foot tunnel.

**Washington and La Plata Mining Company (The).**—Incorporated under the laws of West Virginia, in September, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Algernon S. Griggs, Washington; vice-president and superintendent, Lewis C. Tilghman, Durango; treasurer, Hector McNeil; secretary, Edward Baltzley; general manager, W. S. Odell—all Washington; offices 524 Tenth street, Washington, D. C., and Durango, Colo.; owns the Baltzley Tunnel site, 3000x6 feet; situated at head of the La Plata River, and in La Plata Basin, California district; located in October, 1882; on which a tunnel is driven 215 feet long, designed to cut the Tippecanoe vein, on which this Company owns two adjoining claims, 300x1500 feet each, viz., Laura A and another.

**Wide West.**—1500x250 feet; situated on the La Plata River, five miles north of Parrott City, California district; located in 1880; owners J. M. and J. J. Hollingsworth, T. E. Smith, and T. W. Kerrigan, all Parrott City; vein a fissure six feet wide, pay streak from twelve to twenty-four inches, containing galena and gray copper, assaying $50 per ton, in a quartz gangue; developed by one thirty-five-foot cut and one twenty-five-foot tunnel.

**Wilkinson Group.**—Nine claims, 300x1500 feet each, viz.: Mastodon, Eva, Albert, Rose, Annie, Daisy, Morning Star, Peckham, and Snowstorm; situated on the north end of the Silver Mesa and on the Middle Fork of the Florida River, twenty-five miles east of north from Durango, Florida district; located in April, 1881; owner Geo. Wilkinson, Red Wing, Minn.; veins all fissures, from one to five feet in width, with pay streaks from six to twenty-four inches, containing galena carrying gold, silver, and copper, with quartz, assaying from $25 to $45 per ton; developments—nine open cuts, one on each claim, with twenty-foot faces, and one forty-foot tunnel on Mastodon

**Wisdom.**—(See Crystal Valley Group.)

# Las Animas County.

This County occupies the south-eastern corner of the State, and is bounded on the north by Bent, Pueblo, and Huerfano, and on the west by Huerfano and Costilla Counties. It has an estimated population of 10,000, with Trinidad as its county seat, and covers an area of 9,072 square miles. One of its principal resources is coal-mining, the fields around Trinidad and El Moro having much more than local reputation. The coal is bituminous, makes an excellent coke, and is largely used for illuminating purposes; the product for 1882 being 755,000 tons of coal, besides 12,225 tons of excellent coke.

**Bald Mountain Coal Mines.**—H. E. Detmers and E. Ostenberg, both Trinidad, owners; property covers 240 acres, about two and three-fourths miles north of Trinidad; containing a stratum, or vein, of bituminous coal twelve feet thick, with a sixteen-inch vein of hematite iron; developed by an entry 450 feet in length, with thirteen rooms, and an air-shaft thirty-two feet in depth; improvements—incline tram-way 350 feet in length and some buildings.

**Beshoar's Graphite Mine.**—Owned by M. Beshoar, Trinidad; claim 1500x300 feet; situated at Apishapa; containing a graphite vein from three to four feet in width, from which has been taken 120 tons of an excellent quality of graphite.

**Cincinnati and Colorado Coal, Coke, and Iron Company (The).**—Incorporated under the laws of Colorado, November 25, 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, John R. Davey; vice-president, M. Beshoar; secretary and treasurer, S. S. Davis; offices 64 West Third street, Cincinnati, Ohio, and Trinidad, Colo.; owns 6,000 acres of coal land, underlaid by three veins of bituminous coal from six to twelve feet in thickness; developed by six entries 100 feet in length, with some other workings; and there are also in the property, nine well defined veins of red hematite iron, from nine to thirty inches in width, adjoining the coal veins.

**Consolidated Coal and Stone Company (The).**—Incorporated under the laws of Colorado; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president, D. H. Apple; secretary, James M. John; office Trinidad; owns 160 acres of coal land, situated two miles south of Trinidad; containing a stratum, or vein, six feet in width, of bituminous coal, classified as first-class coking-coal; developed by entries, with roads and room; output for 1882, 20,000 tons.

**Delphine and Happy Day.**—Frederick Morris, 2,225 and 2,227 Archer Avenue, Chicago, Ill., owner; claims 1500x300 feet each; situated on the south slope of West Spanish Peak, Spanish Peak district, forty miles north-west of Trinidad; located in 1882; veins both fissures, with crevices from four to ten feet wide, containing quartz and galena, assaying $40 per ton; developed by a tunnel thirty-five feet in length.

**Dora, Waterloo, and Red Rose.**—E. Whiteford and F. B. Chaplain, both Trinidad, owners; claims 1500x300 feet each; situated on the south-east slope of Spanish Peak, forty miles north-west of Trinidad; located in 1882; veins all fissures, with crevices from one to three feet wide, containing galena and copper, assaying $40 per ton, in a quartz gangue; developed by an adit forty feet in length.

**El Moro Coal Mines.**—Situated at El Moro; covering 8,121 acres; owned by the Colorado Coal and Iron Company (see Gunnison County); containing a nearly horizontal stratum, or vein, of coal, varying in thickness from ten to twelve feet, tests on the coal showing 87.47 per cent fixed carbon, and only 10.68 per cent ash; the developments and improvements are quite extensive, and the daily output about 2,000 tons, which can readily be increased if required; output for 1882—235,449 tons of coal and considerable coke.

**Gray's Coal Mines.**—Dr. John Gray, Trinidad, owner; claim covers 160 acres of coal land; situated two and one-half miles south of Trinidad; containing a stratum, or vein, of bituminous coal, eight feet in thickness; developed by an entry 100 feet in length, with some other workings.

**Pride of the West Group.**—R. L. Woothon, C. Barclá, and L. E. Booth, all Trinidad, owners; group comprises ten claims, 1500x300 feet each; situated on the west slope of Spanish Peak, Spanish Peak district, forty miles north-west of Trinidad; located in 1877; veins all fissures, with crevices from five to seven feet wide, and pay streaks from six to twenty-four inches, containing galena and copper, assaying from $50 to $200 per ton, in a quartz gangue; developed by adits aggregating 125 feet.

**Silver Wave Group.**—A. A. Hanser, J. C. Burk, Walter L. Smith, and Charles A. Smith, Apishapa, owners; group comprises twenty claims, 1500x300 feet each; situated on Spanish Peak, Spanish Peak district, forty miles from Trinidad; veins all fissures, with crevices from two to ten feet in width, and pay streaks from four to twenty inches, containing quartz, galena, and iron pyrites, assaying from $25 to $58 per ton; developed by tunnels aggregating 250 feet; in connection with property are two mill sites of five acres each.

**Tempest Group.**—James Harlan, C. S. Crosthwait, A. Winans, and L. Winans, all La Veta, Colo., owners; group comprises five claims, 1500x300 feet each; situated on the south slope of Spanish Peak, Spanish Peak district, forty miles from Trinidad; located in 1882; veins all fissures, with crevices from three to five feet wide, containing quartz with galena, assaying $50 per ton; developed by a tunnel ninety feet in length and a shaft sixty feet in depth.

**Thatcher Coal Mines.**—Thatcher Bros., owners; F. G. Bloom, superintendent; office Trinidad; claim covers eighty acres of coal land; situated one and one-half miles south of Trinidad; containing a stratum, or vein, of bituminous coal, from four to ten feet thick; developed by an entry 300 feet in length, with some other workings.

**Trinidad Coal and Coking Company (The).**—Incorporated under the laws of Colorado; president, W. D. Strong; treasurer, E. Wilder; general manager, C. C. Wheeler; superintendent, E. J. Savage; office Starkville, Colo.; property situated at Starkville, five miles south-west of Trinidad; containing a stratum, or vein, of bituminous coking-coal, six feet in thickness; developed by an entry 2,000 feet in length, with roads and some other workings; output for 1882—110,000 tons.



**Weasel.**—Whiteford, Kreeger, Booth, and Owens, all Trinidad, owners; claim 1500x300 feet; situated on the south-west slope of Spanish Peak, in Spanish Peak district, forty miles north-west of Trinidad; located in 1882; vein a fissure, with a crevice three feet wide, and a pay streak twelve inches, containing quartz and galena, assaying $50 per ton; developed by a tunnel thirty feet in length.

**Whiteford and Chaplain Group.**—E. Whiteford and F. B. Chaplain, both Trinidad, owners; group comprises six claims, 1500x300 feet each; situated on the west slope of Spanish Peak, forty miles north-west of Trinidad; located in 1882; veins all fissures, varying in width, and containing galena and copper, assaying from forty to fifty ounces silver per ton, in a quartz gangue; developed by an adit eighty feet in length.

# Mesa County.

This County was created by a division of Gunnison in the spring of 1883, and occupies a portion of the extreme western side of the State, adjoining Utah Territory; being bounded on the north by Garfield, on the east by Pitkin and Delta, and on the south by Delta and Montrose Counties. It has an estimated population of 1,500, with Grand Junction as its county seat and chief center, and covers an area of 3,100 square miles. Its mineral resources are somewhat limited, being confined to the placer grounds on the Dolores, and perhaps on the Grand River—said to be valuable, but worked only to a limited extent—and the new discoveries in Un-a-weep Cañon. The latter section has recently acquired quite a local reputation, the lodes being as a rule large, and said to contain a very fair material, frequently with a large percentage of copper.

**Claude R., Washington, Lady Elgin, and Little Giant Placers.**—Covering 160 acres; situated on the Dolores River, eight miles below the mouth of the San Miguel, twenty-five miles west of Delta, Illinois district; located in August, 1882; owners W. A. Barnes and L. D. Roudebush, both New York City, John A. Logan, Chicago, J. C. Sherwin, Aurora, Ill., L. M. Kelly, Elgin, Ill., A. McKinsey, Frank Hatton, and J. S. Poore, all Rico, and Jerry C. Ryan, Silverton; developments—100 feet of ditching and four shafts thirty feet deep each.

**Joe Dandy and Pioneer.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in the east end of Un-a-weep Cañon, about fifteen miles from Grand Junction; located in 1882; owners of the former, A. McKinsey, J. S. Poole, and Frank Hatton, all Rico, and L. M. Kelly, Elgin, Ill., and of the latter, David Evans, Robert Allison, James Hall, and A. McKinsey, all Rico; vein a fissure fifteen feet wide, pay streak from fifteen to twenty inches, containing spar quartz, carrying copper, galena, and antimonial silver, one assay showing forty-one per cent copper, fifty-three ounces silver, and three ounces gold; developments—on the Joe Dandy one ten-foot shaft, and on the Pioneer one forty-five-foot shaft.

**Little Gem Placer.**—160 acres; situated on the Dolores River, nines miles below the mouth of the San Miguel, and twenty-five miles west of Delta, Illinois district; located in August, 1882; owners Gus. Misch, David Evans, Robert Allison, Frank Iler, Thos. Radigan, Richard Hamlin, and Wash. and Ed. Purdy, all Rico; developed by 1,506 feet of ditching and a dam twelve feet high and thirty-five feet long.

**Pioneer.**—(See Joe Dandy and Pioneer.)

# Montrose County.

This County was created in the spring of 1883, and occupies a portion of the extreme western side of the State, being bounded on the north by Mesa and Delta, on the east by Gunnison, and on the south by San Miguel County. It has an estimated population of 700, with Montrose as the county seat, and covers an area of 2,300 square miles, the greater part of which is devoted to the pursuit of stock-raising and agriculture, the only mineral resources being the placer grounds on the San Miguel and Dolores Rivers, with some coal deposits on the Uncompahgre.

**Almeda Placer.**—160 acres; situated on the San Miguel River, about forty-five miles north-west of Placerville, Oro district; located in 1879; owners C. H. Cobb, Ouray, Wm. and Edward Callan and Alfred Smith, all Placerville, S. J. and R. H. Blake, Chipeta, Geo. V. Meserole and George E. Blake, both Pueblo; developed by fifty feet of ditching; improvements—one cabin; production probably twenty-two cents per cubic yard.

**Cottonwood Placers.**—Five claims of 160 acres each, viz.: Cottonwood Bar, Lauer, Rockford, Monitor, and Square Deal; situated on the San Miguel River, thirty-five miles north-west of Placerville, Oro district; located in January, 1882; owners Gordon Kimball, A. Parsell, and others, all Ouray; developments—one-half mile of ditch; improvements—two cabins and one stone store-house; altogether worth about $1,500.

**French Group of Placers.**—Five claims, 160 acres each; situated on the lower San Miguel River, forty-five miles north-west of Placerville, Oro district; located in September, 1882; owners W. H. Bennetts, E. McIntyre, Thomas Carroll, J. H. Foy, J. Phelan, L. E. Presnell, all Rico, C. O. French, J. B. Erhardt, both New York City; developed by one mile of ditching.

**Meserole and Blake Placers.**—Six claims of 160 acres each, viz.; Meserole, Dunning, Rough-and-Ready, Ouray Bar, Gold Bar, and Weston; situated on the San Miguel River, forty-five miles north-west of Placerville, Oro district; located February 22, 1881; owners George V. Meserole and A. E. Blake, both Pueblo, George E. Blake, W. W. Stoddard, and Wm. Weston, all Ouray, J. B. Blake, Avoka, Ills., N. H. Davis, Chicago, G. W. and Thomas S. Dunning, both Portland, Me., R. H. Blake, Chipeta, Colo., E. A. Spoons, Council Bluffs, Ia., and A. H. Brown, Washington, D. C.; production probably twenty cents per cubic yard; developments—one and one-half miles of ditching.

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**Red Mountain, Ouray County, Colorado.**

# Ouray County.

This County, named in honor of the late distinguished chief of the Ute Indians, occupies the north-west portion of the San Juan mineral region, and is bounded on the north by Gunnison, on the east by Hinsdale, on the south by San Juan and San Miguel, and on the west by San Miguel County. It has an estimated population of 4,000, with Ouray, situated in a beautiful amphitheater on the Uncompahgre River, with a fixed population of about 1,000, as its county seat and chief center and covers an area of 180 square miles, the greater part of which may be regarded as mineral lands.

The formation in which the veins containing the precious metals appear—with the exception of the "Mineral Farm," lying in sedimentary strata, and a few undeveloped orestreaks in metamorphic rocks—may be described as eruptive, belonging to the great Tertiary overflow of the San Juan Range. A great majority of these lodes carry argentiferous ores only, with a very small percentage of gold; although a few are auriferous, containing very little silver, the latter generally being of a more recent period and intersecting the others. The minerals commonly occurring, in the order of their abundance, are as follows: Galena, sphalerite, freibergite, chalcopyrite, pyrite, stephanite, bismuth-silver, pyrargyrite, native silver, and argentite, in a highly crystaline gangue-matter, more especially in barren ground, the general matrix being quartz, rarely sulphate of baryta, and exceptionally fluorite, yielding, when sorted, as shown by a great number of mill tests, from $100 to $250 per ton.

During the past year enormous bodies of ore were discovered in the Red Mountain district, between Ouray and Silverton, and this section is at the present time the scene of unusual interest, by reason of these revelations. As to the character of the veins opinions differ, some insisting that the mineral-bearing zone is an immense horizontal contact, having its outcrop on the Red Mountain Creek side of the range and dipping into the mountain, while others contend as obstinately that they are merely irregular, segregated, contact ore deposits, and others again for the fissure theory. These, however, are questions which will gradually be solved by practical mining; and no matter what the conclusion, certain it is that the Red Mountain district has a great future. The ores are of two kinds, viz., galena and copper ore, which may either be antimonial or black oxide of copper, the gangue and banded texture generally found in the quartz veins of Ouray County being nearly always absent.

The bullion output from 1876 to 1880, inclusive, as closely as can be estimated, was $260,000, or $52,000 per annum, since which date the increase is quite marked. In 1881 the product was $78,000, while in 1882 it advanced to $329,760.

In the present condition of things only the richer ores can be shipped to market. Montrose, thirty-five miles from Ouray, is the nearest railway point, but the people are moving unitedly and vigorously for relief, and it is probable that the D. & R. G. R'y will afford them the necessary connection some time during



the present year. There is no doubt that, with the advantages afforded by the proposed railway connection, Ouray would send from the sources already opened hundreds of tons of ore per day.

There are some placers on the Uncompahgre, near the mouth of Dallas Creek, and some large bituminous coal deposits just across the county line, in Gunnison.

**Acorn.**—300x1500 feet; situated on the west slope of Red Mountain, adjoining Red Mountain Town on the south-east, Red Mountain district; located in August, 1882; owners Geo. Howard, Thos. Gill, Edward Cubbin, Edward Hogg, Thos. C. Holden, and John Callow, all Red Mountain Town; ore body apparently a deposit, one fifty-foot tunnel showing quartz carrying galena and yellow and black copper, and one twelve-foot-face cut showing iron pyrites in a quartz gangue.

**Ada.**—300x1500 feet; situated on the west side of the Uncompahgre River, three-fourths mile south of Ouray, Uncompahgre district; located in 1880; owners Geo. R. Todd and James A. Drummond, both Ouray; vein a fissure, pay streak thirty inches, containing galena, zinc, iron, and copper, assaying $20 per ton, in a quartz gangue; developed by one open cut and a tunnel twenty feet long.

**Agnes.**—(See Declaration and Agnes.)

**Albany.**—300x1500 feet; situated on the east side of Red Mountain Park, five miles south of Ouray, Uncompahgre district; located in 1880; owners Wm. Story, Wm. Munn, and Isaac Martin, all Ouray; ore body probably a deposit, a tunnel forty feet long, showing more or less galena, iron pyrites, and iron carbonates all the way down, assaying from five to twenty-five ounces silver per ton.

**Albia.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile north of Red Mountain Town, Red Mountain district; located in September, 1882; owned by George Madden and Miles Corwin, both Red Mountain Town, and John A. Adams, Telluride; ore body probably a deposit, a tunnel forty-five feet long showing galena and arsenical copper on all sides after the first thirty feet, assaying fifteen per cent copper, fifteen per cent lead, and twenty-five ounces silver per ton.

**Allan.**—300x1500 feet; situated on the north side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in May, 1879; owner W. H. Fourrell, Ouray; vein a fissure five feet wide, pay streak twelve inches, containing galena, assaying an average of sixty ounces silver per ton, one inch of which runs much higher, in a quartz gangue; developed by one tunnel twenty feet long and one eighteen-foot open cut.

**Alpine.**—300x1500 feet; situated on the east side of Red Mountain Creek, six and one-half miles south of Ouray, Red Mountain district; located in January, 1883; owner J. E. Gilbert, Ouray; vein probably a fissure, six feet wide, pay streak fourteen inches, containing galena and quartz, assaying eighteen ounces silver per ton; developed by an adit with an eighteen-foot face.

**Altoona.**—300x1500 feet; situated in Yankee Boy Basin, nine miles south-west of Ouray, Mt. Sneffles district; located in July, 1876; owners W. A. Clark and Warren Patten, both Ouray; vein a fissure, four feet wide, pay streak from twelve to sixteen inches, containing galena, gray copper with some ruby and brittle silver, in a quartz gangue, milling when sorted, from 150 to 200 ounces silver per ton; developed by one seventy-foot drift and one forty-foot shaft from the bottom of the drift; output twenty-five tons.

**Amazon and Amazon Extension.**—Two claims, 300x1500 and 300x600 feet, respectively; situated on the west slope of Red Mountain, 1,000 feet south-east of Red Mountain Town, Red Mountain district; located in September, 1882, and in February, 1883, respectively; owners J. W. Fleming, Geo. Howard, Edward Hogg, Edward Cubbin, and John Callow, Thomas Gill, all Red Mountain Town; ore body probably a deposit; one thirty-six-foot tunnel, from end of which an eighteen-foot shaft is sunk, the latter showing arsenical copper on all sides scattered through the rock, milling four per cent copper and fifteen ounces silver per ton; other developments—one fifteen-foot shaft and fifteen-foot adit on this property.

**Amelia.**—(See Ethan Allen Consolidated Gold and Silver Mining Company.)

**Amelia.**—300x1500 feet; situated on the west slope of Red Mountain, one-third mile north-east of Red Mountain Town, Red Mountain district; located in February, 1883; owners A. J. Vance, Red Mountain Town, H. C. Casebolt, Silverton, and J. P. Vance, Cincinnati; vein probably a contact, a porphyry wall appearing on one side, thirty feet wide at the outcrop, and having the indications of being a "blow-out," containing six feet of galena in a quartz gangue, assaying thirty ounces silver per ton; developed by one fourteen-foot-face cut.

**American Girl.**—Owners A. Parcell, Alex. Gould, and Jasper Brown, all Ouray, and J. A. Brown, Ashmore, Ill.; claim 300x1500 feet; situated on the west slope of Red Mountain, one mile south of Ironton, Red Mountain district; located in October, 1882; ore body probably a deposit; developed by one shaft, showing galena and arsenical copper in a decomposed porphyry.

**American Wonder.**—Owners Frank W. Ingersoll, Silverton, and Perry Terpenning, Red Mountain Town; claim 300x1500 feet; situated on the west slope of Red Mountain, between the Yankee Girl and Guston, one and one-half miles north of Red Mountain Town, Red Mountain district; located in February, 1883; vein probably a fissure, being traceable on the surface for 1,000 feet, two and one-half feet wide, containing decomposed matter and showing a seam of quartz on one side carrying iron pyrites and copper sulphates; developed by one ten-foot tunnel on the vein.

**Anaconda and Success.**—Two claims, 300x1500 feet each; situated in Silveride Basin, one and one-half miles west of Red Mountain Town, Red Mountain district; located in 1881; owner the Treasure Mountain Mining and Milling Company (see San Juan County); veins both fissures, seven and two and one-half feet wide, respectively, containing quartz carrying galena; developed by one fifteen-foot shaft on each claim.

**Angeling.**—(Extension of York State); 300x1500 feet; situated on the east slope of Treasure Hill, nine miles south-west of Ouray, Mt. Sneffles district; located in 1876, and patented in 1883; owner Eugene McCarthy, Silverton; vein a fissure from four to five feet wide, pay streak from two to three feet, containing galena, with some brittle silver, in a spar gangue, assaying fifty ounces silver per ton; developed by one fifty-foot tunnel and two open cuts thirty and ten feet fong, respectively.

**Army and Navy.**—300x1500 feet; situated on the east side of the Uncompahgre River, three and one-half miles north of Ouray, Uncompahgre district; located in 1880; owners Dr. W. W. Rowan and Dr. Alex. Hazard, both Ouray, and Dr. Leo H. DeLange, Philadelphia; vein a fissure four feet wide, pay streak from ten to fifteen inches, containing chlorides and quartz, assaying seventy ounces silver per ton; developed by three tunnels, eighty, forty, and twenty feet long.



**Asia.**—300x1500 feet; situated on the east side of Brown Mountain, two and one-half miles west of Red Mountain Town, Red Mountain district; located in March, 1882; owners P. K. Scott, B. E. Ladd, Jr., and J. C. S. Marshall, all Rico; vein a fissure eighteen inches wide, pay streak two inches, containing galena; developed by one ten-foot-face cut.

**Aspen.**—300x1500 feet; situated on the west side of Red Mountain Creek, and in Red Mountain Park, five and one-half miles south of Ouray, Uncompahgre district; located in September, 1880; owners Dr. W. W. Ashley and J. D. Hensley, both Ouray; vein a fissure four feet wide, composed of quartz carrying iron and copper pyrites, assaying twenty ounces silver per ton; developed by one twelve-foot shaft and one open cut and one tunnel twenty-five feet long.

**Atlas.**—300x1500 feet; situated in Cumberland Basin, eight and one-half miles south-west of Ouray, Mount Sneffles district; located in June, 1876; owners W. A. Clark and Fred Herbst, both Ouray; vein a fissure six feet wide, pay streak from twenty to thirty inches, containing galena with brittle and ruby silver, assaying from 500 to 1,000 ounces silver per ton, in a quartz gangue; developed by on cross-cut 112 feet long and one open cut and tunnel forty feet long.

**B. D. Palmer.**—(Extension of Riverside); 300x1500 feet; situated on the Red Mountain Creek slope of Mount Abraham, four and one-half miles from Ouray, Uncompahgre district; owners James S. and James B. Davenport, both New York City; vein a fissure, containing quartz, galena, and iron pyrites; developments—one tunnel on the vein fifty feet long and a cross-cut sixty-five feet long.

**Banner Group.**—Four claims, 300x1500 feet each, viz.: Banner, Old Reliable, Little Maggie, and Solid Muldoon; situated on the south slope of Stony Mountain, eight and one-half miles south-west of Ouray, Mount Sneffles district; located in June, 1876; owner W. A. Clark, Ouray; veins all fissures six feet wide each, pay streaks from twenty-four to thirty inches, containing galena and gray copper in a quartz gangue, assaying from 100 to 150 ounces silver per ton; developed by four open cuts thirty feet in length each.

**Bank of San Juan and Tornado.**—Two claims, 300x1500 feet; situated on the north slope of Emma Mountain, eight miles south-west of Ouray, Mount Sneffles district; located in 1876; owners O. W. Jamieson and E. Volkman, both Montrose; vein a fissure forty inches wide, pay streak from four to ten inches, containing galena and gray copper, with some ruby silver in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by two tunnels, one on each claim, 75 and 100 feet long, with some other workings.

**Bell Bros.'s Group.**—Four claims, 300x1500 feet each, viz.: Pine, Iron Age, Black Iron, and Jennie Bell; situated on the west side of Blow-out Mountain, one mile north-east of Ouray, Uncompahgre district; located in 1877; owners Bell Bros., Ouray; vein a horizontal contact with a lime foot-wall from one to four feet thick, containing heavy hematite and specular iron, milling fifty per cent iron and $10 gold per ton; developed by $2,000 worth of workings

**Belle of the West.**—(See Providence Mining Company.)

**Belle of the West.**—300x1500 feet situated at the mouth of Diamond Creek, five miles south of Ouray, Uncompahgre district; located in July, 1879; owners Wm. Kilpatrick and Chas. Woodcock, both Ouray; vein a fissure four feet wide, pay streak six inches, containing iron pyrites and quartz, assaying seventy-five ounces silver and $8 in gold per ton; developed by one thirty-foot tunnel.

**Bessie Bascom Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; manager, Nathan Caple, Ouray; offices New York City and Ouray; owns five claims, 300x1500 feet each, viz.: Bessie Bascom, Ida Wyle, Buckeye Boy, Little Rose, and Colorado; situated in the Mt. Sneffles district, nine and one-half miles from Ouray; patented in 1881; veins all fissures, varying in width, and in the Bessie Bascom, the principal claim, about four feet wide, containing galena with some ruby and wire silver in a quartz gangue, milling, when sorted, from $100 to $250 per ton; developments—about 500 feet of workings; output probably 100 tons; and in the other claims the ore, gangue, and vein-matter are similar but are less developed.

**Big Galena.**—300x1500 feet; situated on the east slope of Monument Mountain, one mile west of Ouray, Uncompahgre district; located in March, 1879, and patented in January, 1883; owners the Gold Run Placer Mining Company (see San Miguel County); vein a fissure fifteen feet wide, with two pay streaks twenty and thirty inches wide, containing galena, iron and copper pyrites, and quartz, assaying from $20 to $100 in silver and gold per ton; developed by three open cuts fifteen feet long each.

**Big Missouri.**—300x1500 feet; situated on the west slope of Red Mountain, two miles below and north of Ironton, Red Mountain district; located May 24, 1883; owners I. M. and James Kelsey, both Telluride; vein probably a contact, varying in width, and containing a fair material; developments—one ten-foot cut with a ten-foot face.

**Big Monster.**—300x1500 feet; situated at the head of Cow and Bear Creeks, seven miles north-east of Ouray, Uncompahgre district; located in May, 1882; owners Geo. E. Berry, Rose's Cabin, John Mudge, and Louis Weinberg, both Lake City; vein a fissure ten feet wide, pay streak thirty inches, containing galena and some black sulphurets in a quartz gangue, assaying $70 per ton; developments—one twelve-foot shaft.

**Bismarck.**—300x1500 feet; situated on the south slope of Potosi Mountain, seven miles south-west of Ouray, Mount Sneffles district; located in August 1876; owners Herman Stark, Montrose, Bueneman Bros., Ouray, and others, Colorado Springs; vein a fissure five feet wide, pay streak twelve inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty ounces silver per ton; developed by one shaft twenty feet deep, and several open cuts.

**Bismuth.**—300x1500 feet; situated on the west side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in 1878; owners C. B. Dudley, Ouray, and the estate of A. C. Pierce; vein a fissure six feet wide, pay streak fourteen inches, containing galena, gray and yellow copper in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by a cross cut tunnel 100 feet long, from end of which is thirty feet of drifting.

**Black Prince.**—300x1500 feet; situated on the south side of Bear Creek, four miles east of Ouray, Uncompahgre district; located in 1877; owners M. B. Gerry and E. I. Stirman, both Lake City, and Jno. Henderson and Wm. Davy, both Capitol City; vein a fissure, nine feet wide, containing quartz carrying gray copper, and galena on which one mill-run of sorted ore, showed sixteen ounces silver per ton; developed by two drifts ten and seventy feet long, respectively.



**Blackbird.**—300x1500 feet; situated on the north side of Bear Creek four miles south-east of Ouray, Uncompahgre district; located in May, 1876 owners John Duff, Ouray, and S. B. Schrontz, Del Norte; vein a fissure ten feet wide, pay streak from ten to fifteen inches, containing quartz carrying brittle silver and sulphurets, milling, when sorted, 150 ounces silver per ton; developed by one tunnel seventy feet long, and one shaft thirty feet deep; output twenty-five tons.

**Blackstone.**—300x1500 feet; situated on the south slope of Ruby Mountain, six and one-half miles south-west of Ouray, Mt. Sneffles district; located in 1877; owners Emile Charest, and Jno. Castano, both Ouray; vein a fissure eight feet wide, pay streak eighteen inches, containing galena, and gray copper, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by one shaft twenty feet deep, and one open cut thirty feet long.

**Blank.**—300x1500 feet; situated on the west slope of Red Mountain, one mile east of Red Mountain Town, Red Mountain district; located in February, 1883; owners M. E. Hopkins, Chattanooga, and R. H. Rose and Robert Woods, both Red Mountain Town; ore body probably a deposit, one twelve-foot-face cut showing some galena and gray copper scattered through the quartz.

**Blue-grass.**—(Extension of Monongahela); 300x1150 feet; situated in Virginius Basin, eight and one-half miles from Ouray, Mount Sneffles district; located in 1877; owners L. W. Tevis and M. D. Crow, both Ouray; vein a fissure four feet wide, pay streak from four to fourteen inches, containing galena and gray copper, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by two shafts 150 feet deep each and two fifty-foot levels.

**Bob. Ingersoll.**—(Extension of Humboldt); 300x1500 feet; situated on the east slope of Emma Mountain, eight miles south-west of Ouray, Mount Sneffles district; located in March, 1879; owners F. C. Meyer, Ouray, and H. E. Volkman and O. W. Jamieson, both Montrose; vein a fissure six feet wide, pay streak from ten to fifteen inches, containing galena with brittle silver, assaying eighty ounces silver per ton, in a quartz gangue; developed by one shaft twenty feet deep.

**Bonita.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile east of Red Mountain Town, Red Mountain district; located in March, 1883; owned by W. C. Edwards and M. M. Smith, both Red Mountain Town; vein probably a fissure, containing fifteen feet of mineralized quartz, which assays from five to fifteen ounces silver per ton; developments—ten-foot-face open cut.

**Britannia.**—300x1500 feet; situated on the divide between the Virginius and Yankee Boy Basins, eight miles south-west of Ouray, Mount Sneffles district; located in August, 1880; owners Jno. Godin, Jno. Svenson and Clarence May, all Ouray; vein a fissure four feet wide, pay streak sixteen inches, containing galena and gray copper with ruby silver in a quartz gangue, milling, when sorted, from 150 to 200 ounces silver per ton; developed by three tunnels, ten, fifteen, and twenty-five feet deep, respectively.

**Buena Vista Mountain Mining Company (The).**—Incorporated under the laws of Colorado in December, 1880; capital stock

$80,000, in 800 shares of $100 each, non-assessable; president, W. D. Robinson, Kittanning, Pa.; vice-president and treasurer, ——Westerman, Millerstown, Pa.; secretary, Arthur W. Sherman, —— ——, Conn.; manager, Jas. A. Fleming, Denver; offices Kittanning, Pa., and Ouray, Colo.; owns the Silver Point lode, 300x1500 feet, and the Silver Point Mill site, five acres; the former situated on the west slope of Engineer Mountain, and the latter on the Uncompahgre River, about four miles south-east of Ouray, Uncompahgre district; located in 1877, and patented in August, 1882; vein a fissure in a quartzite formation, four feet wide, pay streak from twelve to twenty-four inches, carrying galena with iron and copper pyrites in a quartz gangue, milling when sorted, an average of about seventy-five ounces silver per ton; developed by three levels, 30, 125, and 90 feet long, respectively, and one shaft forty-eight feet deep; improvements—a tram-way 1,500 feet long connecting the mine with the mill site, on which the Company will build a mill this summer.

**Calliope.**—300x1500 feet; situated on Red Cañon Creek, four miles north of Ouray, Uncompahgre district; located in August, 1880, and patented in November, 1881; owner O. J. Davis, Ouray; vein a fissure, six feet wide, carrying some native silver in its quartz, and mixed up through the quartz are pieces of jet, pay streak from two to ten inches, containing galena, with some native and brittle silver, in a quartz gangue, milling, when sorted, 110 ounces silver per ton; developed by one shaft thirty-five feet deep and one cross-cut tunnel 130 feet long.

**Calumet.**—(On the Ruby Trust vein); 300x1500 feet; situated on the south slope of Lookout Mountain, eight miles south-west of Ouray, Mt. Sneffles district; located in September, 1882, and patented in December, 1882; owners Reed Bros., F. A. Wilde, and David Frakes, all Ouray; vein a fissure, from two to five feet wide, containing quartz and porphyry, carrying ruby and brittle silver, milling, when sorted, 150 ounces silver per ton; developed by one shaft twelve feet deep and one tuunel 100 feet long.

**Caribou.**—(See Imogene Group.)

**Caroline Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; secretary, H. S. LeRoy, New York City; general manager, Jno. H. Maugham, Lake City; superintendent, H. W. Reed, Ouray; offices No. 2 Nassau street, New York, and at Ouray; owns the Virginius mine, 300x1500 feet; situated in Virginius Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in 1876, and patented in 1878; vein a fissure, with trachyte walls four feet wide, pay streak from three to ten inches, containing galena and gray copper of a very high grade, in a quartz gangue, milling, when sorted, thirty-five per cent lead and from 200 to 300 ounces silver per ton; developed by 2,500 feet of tunneling and levels, and eight shafts ranging from 50 to 130 feet in depth; output 600 tons shipped, with probably 300 tons remaining on the dumps, containing from fifty to sixty ounces silver per ton.

**Celtic.**—(See Grosvenor Group.)

**Champion.**—300x1500 feet; situated on the west slope of Red Mountain, one and three-fourths miles north of Red Mountain Town, Red Mountain district; located in July, 1882, and in process of patent; owners Fred. Turner, Oliver Desautel, Peter Welcome, and Charles Bourdalou, all Silverton; vein probably a fissure, from ten to twelve feet wide, containing galena and copper, assaying forty-four per cent copper, twenty-nine ounces silver, and three-tenths ounce gold per ton, in a quartz gangue; developed by a forty-five-foot shaft and drift from the bottom of the shaft.



**Champion No. 2.**—300x1500 feet; situated in Potosi Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in July, 1882; owners John Northway, Joseph Sampson, and Wm. Hudson, all Ouray; vein a fissure twenty feet wide, pay streak forty inches, containing galena and gray copper, assaying thirty-five ounces silver per ton, in a quartz gangue; developed by one twenty-foot tunnel.

**Champion Group.**—Four claims, 300x1500 feet each, viz.: Champion, Poor Man, Silver Knight, and Sunlight; situated on the north slope of Potosi Mountain, and in Potosi Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in July, 1881; and a five-acre mill site adjoining; owners Henry Blakesly, Wm. Inch, and Richard Vigars, all Ouray; veins all fissures from two to twenty feet wide, with pay streaks from six to thirty inches, containing galena, gray copper, and gold-bearing quartz, assaying forty ounces silver and $8 gold per ton; developed by four tunnels from thirty to fifty feet long each and aggregating 170 feet.

**Champion and Spectator.**—Two claims, 300x1500 feet each; situated on the north side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in August, 1878; owners Joseph Papillon, Ouray, and the Belle of Ouray Mining Company; veins both fissures from three to four feet wide, pay streaks from twenty-four to thirty inches, containing galena and gray copper with brittle silver, in a quartz gangue, milling, when sorted, thirty-two ounces silver per ton; developed by three tunnels, thirty-eight, twenty, and twenty-five feet long.

**Charter Oak.**—300x1500 feet; adjoining Red Mountain town on the east, Red Mountain district; located in August, 1882; owner the Treasure Mountain Mining and Milling Company (see San Juan County); vein probably a fissure, eighteen inches wide, containing heavy galena, assaying seventy per cent lead and twenty-five ounces silver per ton, in a quartz gangue; developed by an open cut and tunnel thirty feet long.

**Charles Morris.**—(See Chicago and Ouray Mining Company.)

**Checkmate.**—300x1500 feet; situated on the north-west side of Diamond Creek, five miles south-east of Ouray, Uncompahgre district; located in June, 1881; owners A. C. Yost, Frank Englehart, and John Denny, all Ouray; vein a fissure five feet wide, pay streak from ten to fourteen inches, containing galena and gray and yellow copper, assaying from 75 to 100 ounces silver per ton, in a quartz gangue, and the entire vein is more or less mineralized; developed by an open cut and tunnel thirty feet long.

**Chicago and Ouray Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1880; president, D. C. Hough; office 66 Exchange Building, Union Stock-yards, Chicago; owns the Charles Morris, 300x1500 feet; situated on the Uncompahgre River, three miles from Ouray, Uncompahgre district; located in 1876; vein a fissure five feet wide, pay streak from ten to eighteen inches, containing galena and gray copper, assaying twenty-five ounces silver per ton, in a quartz gangue; developments—one twenty-five-foot drift and one sixty-six-foot cross-cut.

**Chicago.**—(Extension of Grand View); 300x1500 feet; situated on the Uncompahgre River slope of Ouray Mountain, three-quarters mile south of Ouray, Uncompahgre district; located in 1876, and patented in 1882; owners George P. Costigan, Telluride, and Perry Terpenning, Red Mountain Town; vein a fissure five feet wide, pay streak eighteen inches, containing iron and copper pyrites, copper carbonates, and occasionally a little galena, in a quartz gangue, milling, when sorted, $60 gold and $20 silver per ton; developed by one tunnel sixty feet long and one ten-foot shaft.

**Chicken Bill.**—300x1500 feet; situated on the south-east slope of Treasure Hill, eight miles south-west of Ouray, Mt. Sneffles district; located in 1881, and patented in 1883; owners Thos. C. Stevens, Trinidad, and Christopher Cogan, Ouray; vein a fissure four feet wide, pay streak sixteen to twenty-four inches, containing galena with ruby and brittle silver, assaying forty per cent lead and from 100 to 400 ounces silver per ton, in a quartz gangue; developed by one tunnel fifty feet long and two open cuts from twenty to thirty feet long.

**City View, Lookout, and Sanford.**—300x1500 feet each, the two first adjoining claims on the same vein; vein probably a fissure, forty feet wide, pay streak five feet, containing decomposed galena and talc, and the last lying parallel, probably a fissure, forty feet wide, pay streak six feet, containing copper-stained talc and decomposed galena; situated on the west slope of Red Mountain, one-fourth mile east of Ironton, Red Mountain district; located in 1883; developments—open cut and tunnel seventeen feet long, five feet of which is under cover, in the City View; ten-foot-face cut on Lookout, and thirty-foot cut and tunnel, fifteen feet of which is under cover, on Sanford; owners John Carroll and R. S. Street, both Ironton.

**Cliff Group.**—Five claims, 300x1500 feet, viz.: Cliff, Maggie, Indiana, Maggie May, and Fannie; situated on the east side of the Uncompahgre River, five miles south of Ouray, Uncompahgre district; located in 1878 and 1880; owners L. C. Copeland, C. E. Austin, L. C. Hunsaker, and A. J. Hunsaker, all Ouray; veins all fissures from three to five feet wide, pay streaks from five to twelve inches, containing galena and gray copper, assaying sixty ounces silver per ton, in a quartz gangue; developed by five tunnels, one on each claim, sixty feet long each, and one shaft fifteen feet deep.

**Climax.**—(See Silver Link Mining Company.)

**Climax.**—300x1500 feet; situated on the west side of Red Mountain Creek, three-fourths of a mile west of Red Mountain Town, Red Mountain district; located in February, 1882; owners H. H. Trowbridge and others, all Red Mountain Town; vein probably a fissure two and one-half feet wide, pay streak ten inches, containing copper and iron pyrites, assaying ten per cent copper and eighteen ounces silver per ton, in a quartz gangue; developments—one twelve-foot shaft.

**Climax and Contact.**—Two adjoining claims on the same vein, 300x1500 feet each; situated one-half mile west of Ironton, Red Mountain district; located in February, 1883; owners S. T. Stanton, Silverton, and others; vein a fissure six feet wide, pay streak thirty inches, containing galena and native copper, milling forty-eight per cent lead, thirty per cent copper, and sixty ounces silver per ton, in a quartz gangue; developed by one shaft fourteen feet deep and one eleven-foot-face cut, respectively, on each claim.

**Climax and Iron.**—Two claims, 300x1500 feet each; situated on the west slope of Red Mountain, in Red Mountain Town, Red Mountain district; located in November and October, 1882, respectively; owners C. R. Clark, F. H. Miner, W. E. Leslie, E. H. Cooper, and John Mullowney, all Red Mountain Town; ore body probably deposits, one fifty-foot shaft, on the former, showing copper chlorides after the first ten feet, and in the latter one forty-foot tunnel, showing magnetic iron after the first twenty feet, assaying seven per cent copper, sixty per cent iron, and ten ounces silver per ton.

**Cochran Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $20,000, in 200 shares of $100 each, non-assessable; secretary, E. A. Drake; treasurer, Wellington Smith—both



Bradford, Pa.; agents, Bell Bros., Ouray; offices Bradford, Pa., and Ouray; owns two claims, 300x1500 feet each, viz., Crescent and Sunny South; situated on the west slope of Engineer Mountain, three miles south-east of Ouray, Uncompahgre district; located in 1876 and 1877, respectively; veins both fissures, in the former four feet wide, containing iron and copper pyrites, with some brittle silver, assaying forty ounces silver per ton, in a quartz gangue, and in the latter thirty inches, containing heavy galena and iron pyrites, assaying fifty-five ounces silver per ton, in a quartz gangue; developments—two open cuts fifteen feet long each and one tunnel thirty feet long.

**Colby C. C.**—Owned by Guy C. Nobles, St. Albans, Vt., C. C. Colby, Stanstead, P. Q., and A. H. Moore, Magog, P. Q., and others; claim 300x1500 feet; situated on Middle Creek, near the mouth of Poughkeepsie Gulch, Uncompahgre district; located in 1875; vein a fissure, five feet wide, pay streak from six to twelve inches, containing galena in a quartz gangue, milling, when sorted, sixty ounces silver per ton; developed by one thirty-foot tunnel on the vein.

**Columbus.**—(Extension of Davis); 300x1500 feet; situated on Mt. Hayden, Uncompahgre district; owners James S. and James B. Davenport, both New York City; vein a fissure six feet wide, containing quartz, galena, and iron pyrites, assaying from twenty-five to fifty-five per cent lead and from twenty to forty-five ounces silver per ton; developed by one sixty-foot tunnel on the vein.

**Comstock and Painters.**—Two parallel claims, 300x1500 feet each; situated on the west slope of Red Mountain, one mile south of Ironton, Red Mountain district; located in March, 1883; owned by M. A. Blackmer and M. H. Gibbs, both Chicago, and G. M. Effinger, Montrose; ore body probably a deposit, an open cut on each lode, with fifteen and twenty foot faces, respectively, showing iron pyrites in a spar gangue all the way down.

**Confidence and Veta.**—Two claims, 300x1500 feet; situated on the west slope of Red Mountain, 1,000 feet north of Red Mountain Town, Red Mountain district; located in October and November, respectively, 1882; owners C. R. Clark, F. H. Miner, W. E. Leslie, and E. H. Cooper, all Red Mountain Town; ore body probably a deposit, one forty-foot tunnel and one fourteen-foot shaft, respectively, on each claim, showing arsenical copper in a quartz gangue, on all sides, after the first twenty and ten feet, respectively, which assays ten per cent copper and ten ounces silver per ton.

**Conqueror.**—300x1500 feet; situated in Imogene Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in 1878, and patented in 1882; owners Wm. Weston and Geo. Barber, both Ouray; vein a fissure, five feet wide, pay streak from fifteen to twenty inches, containing galena and gray copper, assaying from $25 to $100 per ton, in a quartz gangue; developed by one tunnel ninety feet long and a series of openings on the surface.

**Copper-King.**—300x1500 feet; situated on the west slope of Red Mountain, half mile north of Red Mountain Town, Red Mountain district; located February, 1883; owned by Samuel H. Twigg, Daniel Sweaney, and Alfred Woodruff, all Red Mountain Town, P. Cahill and Theo. E. Ressouches, both Silverton; vein probably a fissure, at least six feet wide, containing galena and some native copper in a quartz gangue; developments—one eighteen-foot shaft, one twenty-foot drift, and cross-cut forty feet long, designed to cut the vein at depth of 125 feet.

**Copper Queen.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mount-

ain district; located in August, 1882; owners C. M. Osman and Ed. Gorman both Silverton, and W. H. Crain, Ophir; ore body probably a deposit, a shaft fifteen feet deep showing arsenical copper on all sides, in a quartz gangue, milling, when sorted, fifteen per cent copper and twenty ounces silver per ton.

**Crescent.**—(See Cochran Mining Company.)

**Crown Jewel.**—300x1500 feet; situated on the north-east slope of Red Mountain, eight miles north-west of Silverton, Red Mountain district; located in December, 1882; owners Stephen Allison, Silverton, A. L. Thompson and —— Burley, both Durango; vein probably a fissure, fifteen feet wide, containing carbonates in a decomposed gangue, assaying thirty per cent lead and forty ounces silver per ton; developments—an open cut and tunnel twenty feet long, ten feet of which is under cover.

**Crystal Group.**—Five claims, 300x1500 feet each, viz., Crystal, Friend, and Grand Junction, three adjoining claims on the same vein; Confidence (on a parallel vein), and Challenge (a cross-lode); situated on the divide between Bear Creek and the Uncompahgre River, five miles south-east of Ouray, Uncompahgre district; located in June, 1880, and in process of patent; owners Wm. Weston, Ouray, and J. W. Adamson, London, Eng.; veins all fissures from three to fifteen feet wide, pay streak from ten to twenty-four inches, containing copper and iron pyrites with some brittle silver, in a bluish quartz gangue, assaying from 50 to 250 ounces silver per ton; developed by ten shafts from twenty to forty feet in depth, and three tunnels, 120, 90, and 40 feet in length.

**Cumberland.**—Owned by Fred. Herbst and others, Ouray; claim 1500x300 feet; located in 1876; situated on Mt. Hendricks, eight miles south-west of Ouray, Mt. Sneffles district; vein a vertical fissure, seven feet wide, pay streak from twelve to twenty-two inches, containing galena and gray copper with some ruby silver, in a quartz gangue, milling, when sorted, from 50 to 300 ounces silver per ton, the assays averaging 250 ounces; developments—one thirty-foot shaft, with some other workings.

**Daisy Placer.**—Eighteen and one-half acres; situated on the east side of the Uncompahgre River, one mile north of Ouray, Uncompahgre district; located in 1875; owners D. F. Day, Ouray, and J. K. Mortland, Denver; developed by 500 feet of ditching, and there is a cabin on the ground.

**Danebroge and Tribune.**—Two claims, 300x1500 feet each; situated in Defiance Gulch, eight miles south-west of Ouray, Mt. Sneffles district; located in 1879; owners W. H. Couse, S. C. Peterson, and Theron Stevens, all Ouray; veins both fissures, five and three feet wide, respectively, pay streaks from five to nine inches, containing galena and gray copper and iron pyrites, assaying forty ounces silver per ton, in a quartz gangue; developed by one twenty-five-foot tunnel and one eighteen-foot open cut.

**Davis.**—(Extension of Briggs); 300x1500 feet; situated on the Red Mountain Creek slope of Mt. Abraham, four miles from Ouray, Uncompahgre district; owners James S. and James B. Davenport, both New York City; vein a fissure, containing quartz, galena, and iron pyrites; developed by a tunnel on the Briggs lode.

**Declaration and Agnes.**—Two adjoining claims on the same vein (the Yellow Rose), 300x1500 feet each; situated at the foot of Imogene Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in 1878, and patented in 1882; owners Wm. Weston and Geo. Barber, both Ouray; vein a fissure, with trachyte walls from four to six feet wide, pay streak, from ten to



thirty-six inches, containing principally a bright galena, associated with iron and copper pyrites, gray copper and blende, in a white crystaline quartz gangue, with native silver in leaves and wire and in many places sheets of silver glance, assaying from $25 to $125 per ton; developed by two tunnels 100 and 610 feet long, respectively, and a series of surface openings.

**Denver.**—300x1500 feet; situated in Amphitheater Basin, one and one-half miles east of Ouray, Uncompahgre district; located in 1881; owners Wm. F. and J. J. Murphy, S. E. Merriam, and P. Boyle, all Ouray; vein a fissure seven feet wide, pay streak twelve inches, containing gold-bearing quartz, assaying forty ounces silver and $150 in gold per ton; developed by one eighteen-foot tunnel.

**Denver.**—300x1500 feet; situated on the west side of the Uncompahgre River, two and one-half miles from Ouray; located in August, 1877; owner Jas. M. Mackey, Ouray; vein a fissure three feet wide, pay streak twelve inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty ounces silver per ton; developed by one sixty-five-foot tunnel and one sixteen-foot open cut.

**Denver and Rio Grande.**—300x1500 feet; situated in Wara's Gulch, north-west of Ironton, Red Mountain district; located March, 1883; owned by J. L. Ware, San Miguel City, M. A. Blackiner and M. H. Gibbs, both Chicago; vein a fissure eight feet wide, containing quartz carrying gray copper and fine galena; developments—twenty-five-foot drift on vein.

**Dexter Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, A. W. Straw, Milwaukee; secretary and general manager, F. A. Wilde, Ouray; treasurer, W. C. Williams, Milwaukee; offices 80 Wisconsin street, Milwaukee, and Ouray, Colo.; owns the J. O. Dexter, 300x1500 feet; situated in Red Cañon Creek Gulch, four miles north of Ouray, Uncompahgre district, located in 1876, and patented March, 1881; vein a fissure, in a shale and quartzite formation, dipping thirty-three degrees, and thirty-five feet wide, with a porphyry vein-matter, and a pay streak fourteen inches, containing sulphide of silver finely disseminated through the porphyry gangue, and native silver accompanied by sulphides of copper, iron, and zinc, and a little galena, milling an average of fifteen per cent lead and twenty-five ounces silver, the sorted ore already sold having yielded from 50 to 2,500 ounces silver per ton; developed by two levels 200 and 600 feet long, respectively, with some other workings; output 600 tons.

**Douglas.**—300x1500 feet; situated on the west slope of Red Mountain, one mile south-west of Ironton, Red Mountain district; located in April, 1883; owners G. D. Lockwood, Silverton, S. Goode and R. H. Rose, both Red Mountain Town, and Chas. Eurey, Pueblo; vein probably a blanket from twenty to twenty-four inches thick, containing galena, gray and yellow copper, and iron pyrites in a soft talc gangue, assaying 200 ounces silver per ton; developed by an open cut and tunnel thirty feet long, ten feet of which is under cover, and the face ten feet high.

**Dutch Boy.**—(See Yankee Boy Group.)

**Eldorado.**—300x1500 feet; situated on the north-west slope of Old Stony Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in August, 1879; owners Wm. Schultz and J. W. Rinker, both Ouray; vein a fissure from two to three feet wide, with trachyte walls, pay streak from five to twenty inches of ruby and brittle silver, gray copper, and copper pyrites, with a small percentage of red blende and a little galena, the gangue of the ores being white quartz and some baryta, milling, when sorted, from 100 to 350

ounces silver per ton; developed by three levels, 140, 50, and 25 feet long, respectively, one seventy-five-foot open cut, and one twenty-five-foot shaft, which was all paid for by the ore taken out in the progress of the work, seventy-five tons remaining on the dump, carrying from fifty to sixty ounces silver per ton.

**Emma and Lulu.**—Two claims, 300x1500 feet each; situated on the west side of the Uncompahgre River, two and one-half miles north of Ouray, Uncompahgre district; located in May, 1882; owners F. G. Burnett and I. R. Penoier, both Ouray; vein a fissure five feet wide, containing galena, zinc blende, heavy pyrites, and oxide of copper, in a quartz gangue; developed by one tunnel thirty-five feet long and an open cut with a fifteen-foot face.

**Emma Mountain Mining Company (The).**—Incorporated under the laws of Colorado, July 18, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. K. Johnston; secretary, S. A. Butler; treasurer, S. F. Scott—all Kansas City, Mo.; manager, David Geiger, Ouray; offices Kansas City and Ouray; owns eight claims, 300x1500 feet each, viz.; Sidney, Pacific, White Cloud, Queenie, Valley View, Alpine, Home, and Illinois; situated on the west slope of Emma Mountain, and in Cumberland Basin, from seven to eight miles south-west of Ouray, Mt. Sneffles district; located from 1880 to 1882, and Sidney patented in 1882; veins all fissures from three to five feet wide, with trachyte walls, and pay streaks from five to twenty inches wide, in the Sidney from ten to twenty inches, containing galena and some gray copper in a quartz gangue, with porphyry vein-matter, milling, when sorted, from 50 to 100 ounces silver per ton; developed by one tunnel 640 feet long, from which there is 200 feet of drifting, and on the other claims the only developments are open cuts from fifteen to twenty feet in length, one on each, and all showing fairly.

**Enterprise.**—300x1500 feet; situated on the west slope of Red Mountain, 500 feet east of Red Mountain Town, Red Mountain district; located in July, 1881; owners J. H. Haynes, Jno. A. Adams, W. T. Flowers, E. S. Yokum, all Telluride, and T. W. Miles, Denver; or body probably a deposit, one tunnel 150 feet long showing arsenical copper, and some galena for the last forty feet, and one thirty-foot shaft showing mineral all the way, assaying ten per cent copper, fifteen ounces silver, and some gold per ton.

**Erie, Raven, and Gertie H.**—Three claims, 300x1500 feet each; situated on the west slope of Red Mountain, one-half mile south of Ironton, Red Mountain district; located in January, 1883; owned by Herman A. Rohe and A. J. Dutton, both Ouray; veins probably fissures, as follows: Erie four feet wide, pay streak six inches, containing copper glance in a quartz gangue; developed by two open cuts with twelve-foot faces each; Raven from sixteen to eighteen inches wide, containing mineralized quartz; developed by an open cut with twelve-foot face; and Gertie H. from eighteen to twenty-four inches wide, of mineralized quartz; developed by a shaft thirty feet deep.

**Ethan Allen Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in August, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. H. Lippincott; vice-president, C. M. Wetherbee; secretary and treasurer, Wm. F Van Deventer—all New York City; manager, Joseph Van Doren, Ouray; office 145 Broadway, New York, and Ouray, Colo.; owns nine claims, 300x1500 feet each, viz.: Amelia, Little Ida, Confidence, Victoria, Eureka, Grand Flag, Blow-out, Stationary, and Angeliqua; situated on Sneffles Creek, eight miles south-west of Ouray, Mt. Sneffles district; located in 1880; veins all fissures from one to five feet wide, containing galena and gray copper, with some ruby and brittle silver, and occasionally gold-bearing quartz, assaying



from 150 to 200 ounces silver and sometimes quite high in gold; developed by four tunnels, twenty, twenty, ten, and ten feet long, respectively, and six shafts from ten to fifteen feet in depth.

**Everetts.**—300x1500 feet; situated on the north slope of Ruby Mountain, six and one-half miles south-west of Ouray, Mt. Sneffles district; located in June, 1878; owners Francis Carney, Ouray, James McCaul, Denver, and A. M. Coburn, Elmira, N. Y.; vein a fissure five feet wide, pay streak fourteen inches, containing galena and zinc blende, assaying twenty-five ounces silver per ton, in a quartz gangue: developed by one tunnel twenty feet long and one open cut and tunnel thirty feet long.

**Exchange.**—300x1500 feet; situated on west slope of Red Mountain, adjoining the Yankee Girl, one and one-half miles north of Red Mountain Town, Red Mountain district; located in January, 1883; owners John Miles, C. M. Osman, P. and Daniel Fitzgerald, and H. Roach, all Silverton; ore body probably a deposit, one shaft fifty-eight feet deep, passing through an iron cap thirty-four feet thick, and after that showing arsenical copper on all sides, assaying twenty-five per cent copper and fifteen ounces silver per ton.

**Finance.**—(See Iron-clad and Finance.)

**First National.**—(An extension of Hidden Treasure); 300x1500 feet; situated on the south-east corner of Imogene Basin, seven miles north-west of Ouray, Mt. Sneffles district; located in 1878, and patented in 1882; owners Wm. Weston and George Barber, both Ouray; vein a fissure four feet wide, with trachyte walls, pay streak from eight to eighteen inches, containing galena and gray copper associated with iron and copper pyrites and red blende, in a quartz gangue, assaying twenty-five per cent lead and from fifty to seventy-five ounces silver per ton; developed by two shafts ten feet deep each and one open cut twenty feet long.

**Flag-staff.**—300x1500 feet; situated on Defiance Gulch, and on the east slope of Stony Mountain, eight miles south-west of Ouray, Mt. Sneffles district; located in 1878; owner L. C. Peterson, Ouray; vein a fissure five feet wide, pay streak twelve inches, containing steel galena with some ruby silver, milling, when sorted, seventy-five ounces silver per ton; developed by two tunnels 100 and 18 feet long.

**Flag-staff and Grand Era.**—Two claims, 300x1500 feet each; situated on the divide between Bear Creek and the Uncompahgre River, three miles south-east of Ouray, Uncompahgre district; located in 1877, and the former patented in 1882; owners Wm. Story, Robt. Proudfoot, and Jos. Enos, all Ouray; veins both fissures, six and eight feet wide, respectively, with pay streaks four inches, containing galena, gray copper, iron and copper pyrites, in a quartz gangue, milling on the Flag-staff, when sorted, probably an average of 150 ounces silver per ton, and sometimes as high as twenty per cent copper; developments— four cross-cuts, 20, 66, 10, and 100 feet long, respectively, and some open cuts.

**Franklin and Hector.**—Two claims, 300x1500 feet each; situated on Cañon Creek, one mile south of Ouray, Uncompahgre district; located in 1878; owners A. G. Siddons, Ouray, and L. W. Simpson, East Saginaw, Mich.; veins both fissures four feet wide each, pay streak eight inches, containing galena, zinc, and quartz, assaying ten per cent lead and forty ounces silver per ton; developed by one thirty-foot shaft and two drifts ten and twenty feet long, respectively.

**Friend.**—(See Crystal Group.)

**Galena Lion.**—300x1500 feet; situated on the east slope of Bear Mountain, two miles west of Red Mountain Town, Red Mountain district; located in August, 1875; owners Ben Harwood and Frank T. Rodd, both Silverton; vein a fissure six feet wide, pay streak twenty-four inches, containing galena in a quartz gangue, milling, when sorted, seventy per cent lead and thirty ounces silver per ton; developed by a tunnel fifty feet long, cutting the vein at a depth of forty feet, and one ten-foot-face cut.

**Garfield.**—Owners Ed. Brinckman, Red Mountain Town, and August Rische, Leadville; claim 300x1500 feet; situated on the west side of Red Mountain Creek, one-half mile west of Red Mountain Town, Red Mountain district; located in March, 1883; ore body probably a deposit, a tunnel twenty feet long showing six feet of quartz carrying arsenical copper and galena.

**General Grant.**—300x1500 feet; situated on the crest of Treasure Hill, eight miles south-west of Ouray, Mount Sneffles district; located in 1882; owners Christopher Cogan, J. R. Letcher, and James M. Hinchie, all Ouray, and Thos. C. Stevens, Trinidad; vein a fissure five feet wide, pay streak from thirty to sixty inches, containing galena with ruby and brittle silver, assaying thirty per cent lead and from 150 to 200 ounces silver per ton, in a quartz gangue; developed by one tunnel twenty feet long.

**Genesee.**—300x1500 feet; situated on the west slope of Red Mountain, eight miles south of Ouray, Red Mountain district; located in August, 1881, and patented in 1883; owners A. Parsell, Jasper Brown, and Silas Pierce, all Ouray; vein probably a fissure, three feet wide, pay streak eighteen inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead, some copper, and twenty ounces silver per ton; developed by two shafts fifteen and twenty feet deep; output fifty tons.

**Geo. W. Hall & Co.'s Mill.**—Manager, Ed. Bell, Ouray; owns a sampling-works and concentrator; situated at Ouray; building 20x30 feet, containing one Foster Crusher, one set Cornish Rolls, and one thirty-ton rig-concentrator, with the necessary motive power.

**Geo. Wilder & Co.'s Mill.**—Situated at Ouray, containing Blake Crusher, Cornish Rolls, Bradford Jigs, Rittinger Tables, sizing apparatus, etc., with the necessary motive power; capacity twenty tons per day (twenty-four hours).

**Germania Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, December 29, 1879; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; directors and officers—president, Henry Fürst; secretary, Henry Dinkleman; treasurer, Frank Campe; John Kummer, Henry Elfring, Chas. Richter, and Peter New; office 170 La Salle street, Chicago; owns five claims, 300x1500 feet each, viz.: Silver King, situated on the west bank of the Uncompahgre River, one-half mile above the mouth of Bear Creek; vein a fissure, containing gold-bearing quartz and galena, with outcroppings of iron pyrites, on which assays have been obtained as high as twenty per cent lead, from $58 to $100 in gold, and from 152 to 400 ounces silver per ton; developments—one twelve-foot-face cut and one seventeen-foot tunnel; Park, situated on the south-east side of the Amphitheater Basin, one mile east of Ouray; vein a fissure, containing gold-bearing quartz, gray copper, and some brittle silver, on which assays have been obtained from $20 to $35 in gold and from 64 to 114 ounces silver per ton; developments—one fifteen-foot-face cut and one thirty-two-foot tunnel; Ohio, situated on the north-west slope of Hardin Mountain, one and one-half miles from Ouray; vein a fissure, containing gold-bearing quartz, gray copper, galena, and brittle silver, on which assays have been obtained from $34 to $50 in gold and from 80 to 107 ounces silver per ton; developments—one thirty-foot-face open cut, one seventy-foot tunnel, and one twenty-five-foot cross-cut; ore on dump sixty tons; all patented, and situated in the Uncompahgre district; and two other claims, viz., the Mount Fürst and Germania; situated in the same district, near Ouray, on which the Company is doing development work.



**Gertrude.**—(See Parsons and Gertrude.)

**Gipsy King.**—300x1500 feet; situated in Poughkeepsie Gulch, nine miles from Ouray, Uncompahgre district; located in 1876; owners Leon Lefevre, Lake City, M. S. Corbett and W. S. Home, both Ouray; vein a fissure, fifteen feet wide, pay streak twelve inches, containing quartz carrying pockets of gray copper and brittle silver, assaying from 50 to 500 ounces silver per ton; developments—one thirty-foot shaft.

**Glen Monarch.**—300x1500 feet; situated on the north slope of Ruby Mountain, six miles south-west of Ouray, Mt. Sneffles district; located in 1880; owners H. F. Blythe, Ouray, B. F. Wilson, W. E. Frazer, and others, all Pittsburgh; vein a fissure, five feet wide, three feet of which is quartz carrying galena, assaying thirty ounces silver per ton; developed by one sixty-five-foot shaft.

**Gelwis.**—300x1500 feet; situated on the north slope of Potosi Mountain, eight miles south-west of Ouray, Uncompahgre district; located in July, 1882; owners Jno. Northway, Joseph Sampson, and Wm. Hudson, all Ouray; vein a fissure, eight feet wide, pay streak four feet, containing galena and gray copper, assaying forty ounces silver per ton, in a quartz gangue; developed by one tunnel twenty-five feet long

**Golden Curry.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in October, 1882; owners F. G. Burnett, J. R. Penoier, H. G. Burt, and J. M. Harris, all Ouray; vein probably a fissure, four feet wide, containing quartz carrying iron and oxide of copper; developed by one forty-foot open cut and tunnel.

**Gov. J. B. Grant Group.**—Four claims, 1500x300 feet each, viz, J. B. Grant, Gulch, Joaquin Miller, and Ranchman; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in September, 1882; owners H. G. Carson, M. W. Dresser, J. R. Letcher, W. E. Block, D. F. Day, R. W. Haskins, and James Call, all Ouray; veins probably fissures, but may be deposits, a shaft from ten to twenty feet on each claim showing oxides of copper and iron through the quartz for a distance of from six to ten feet in each case, and in the first thirty-five feet in width.

**Gracie May.**—(See Tom Culbert and Gracie May.)

**Grand Era.**—(See Flag-staff and Grand Era.)

**Grand View.**—300x1500 feet; situated on the East or Uncompahgre River slope of Ouray Mountain, one-half mile south of Ouray, Uncompahgre district; located in 1876, and patented in 1881; owner E. F. Burton, Oakland, Cal.; manager, James A. Law, Ouray; vein a fissure four and six feet wide, breaking up through the sandstone formation, pay streak from ten to thirty-five inches, containing iron and copper pyrites, with the results of decomposition in the latter, viz., blue and green carbonates of copper, and occasionally a little galena scattered through it, the gangue being quartz porphyry, milling, when sorted, fifteen ounces silver and $60 gold per ton, the latter being con-

tained in the pyrites; developments—two levels 175 and 110 feet long, one eighteen-foot-face open cut, and forty five feet of cross-cutting; output 200 tons.

**Grant.**—(See General Grant.)

**Great Western.**—300x1500 feet; situated on the east side of the Uncompahgre River, one-half mile north of Ouray, Uncompahgre district; located in 1879, and patented in 1882; owners Theron Stevens, Ouray, T. B. Townsend, Montrose, Rodney Curtis, and estate of C. J. Goss, both Denver; vein a fissure, in a sandstone formation twenty-five feet wide, and containing three pay streaks ten inches wide each, and divided by horses of country rock or altered sandstone, composed of copper and iron pyrites, and quartz carrying gold, with a good percentage of copper, milling, when sorted, about $50 per ton in silver, gold, and copper; developed by one ninety-foot tunnel, and one twenty-two-foot cross-cut; output twenty tons.

**Great Western.**—300x1500 feet; situated in Republican Gulch, seven miles south-east of Ouray, Uncompahgre district; located in July, 1882; owners Patrick Dugan, Ophir, James Barry, Red Mountain Town, and Jno. Acket, Silverton; vein a fissure four feet wide, pay streak fourteen inches, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by one ten-foot-face open cut.

**Gray Copper Falls.**—300x1500 feet; situated on the west slope of Brown Mountain, two miles north-east of Red Mountain Town, Red Mountain district; located in August, 1875; owners Ben. Harwood, Frank T. Rodd, and Ed. Lewis, all Silverton; vein a fissure, five feet wide, pay streak eighteen inches, containing gray copper, milling, when sorted, seventy-five ounces silver, and the entire vein is mineralized; developed by a level fifty feet long and a tunnel 140 feet long, designed to cut vein eighty-five feet deep.

**Grosvernor Group.**—Three claims, 300x1500 feet each, viz.: Grosvernor, Celtic, and Big Chief; situated on Sneffles Creek, six and one-half miles south-west of Ouray, Mt. Sneffles district; located from 1878 to 1882; owner A. W. Richardson (D. F. Day is an owner in the Celtic), both Ouray; veins all fissures, from two to twelve feet wide, pay streaks from two to sixty inches in width, containing galena and gray copper in a quartz gangue, milling, when sorted, seventy-five ounces silver and one-half ounce gold per ton; developed by three shafts, eighteen, twenty-seven, and twenty-two feet deep, and one tunnel twelve feet long.

**Guston.**—300x1500 feet; situated on the west slope of Red Mountain one and one-half miles south of Ironton, Red Mountain district; owners John Robinson and others, Ouray; ore body probably a deposit, similar to that in the Yankee Girl, one tunnel about sixty feet long showing galena on all sides, in a white quartz gangue, with a streak of massive copper pyrites about twelve inches wide, this mineral yielding about the same as the Yankee Girl, as shown by assay tests; (this property has recently been sold to the present owners of the Robinson).

**Hancock and Tuscola.**—Two claims, 300x1500 feet each; situated in Imogene Basin, eight and one-half miles south-west of Ouray, Mt. Sneffles district; located in 1879; owners Reed Bros. and D. C. Hartwell, all Ouray; vein a fissure, from two to five feet wide, with trachyte walls, etc., pay streak from fourteen to eighteen inches, containing heavy galena and copper pyrites, with some white quartz gangue, milling, when sorted, an average of sixty per cent lead and from twenty to thirty ounces silver per ton; developed by two tunnels 125 and 30 feet long and one ten-foot shaft.



**Hard Cash.**—300x1500 feet; situated on the north slope of Ruby Mountain, eight miles south-west of Ouray, Mt. Sneffles district; located in January, 1883; owners Wm. Ware, Jno. R. Buckley, and A. Sophy, all Ouray; vein a fissure, forty inches wide, pay streak twenty-five inches, containing galena with some ruby and brittle silver, in a quartz gangue; developed by one open cut and tunnel twenty feet long.

**Hawkeye Placer.**—160 acres, surrounding Red Mountain Town, Red Mountain district; located in July, 1881; owner the Treasure Mountain Mining and Milling Company (see San Juan County); developments—150 yards of ditching; improvements—one building.

**Hector Boy.**—300x1500 feet; situated in Potosi Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in 1880; owners W. H. Couse, Ouray, and Josiah Winchester, Montrose; vein a fissure four feet wide, pay streak from five to nine inches, containing galena and gray copper with some ruby and brittle silver, in a quartz gangue, milling, when sorted, eighty ounces silver per ton; developed by one cross-cut sixty feet long and seventy-five feet of drifting on the vein.

**Hector Boy.**—300x900 feet; situated on the east slope of Bald Mountain, nine miles north-west of Silverton; located in February, 1883; owners Jacob Ross and S. T. Stanton, both Silverton; vein a fissure ten feet wide, pay streak from four to five feet, containing galena and native copper, assaying fifty per cent lead and thirty-nine ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut.

**Hermit.**—(See Pilot, Hermit, and Woodchuck.)

**Hidden Treasure.**—300x1500 feet; situated in Imogene Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in 1878; owners Geo. A. Brantley and Robert W. Bell, both Ouray; vein a fissure in a trachyte formation, four feet wide, containing galena and gray copper, associated with iron and copper pyrites and red blende, in a white quartz gangue, milling, when sorted, thirty per cent lead and seventy-five ounces silver per ton; the developments consisting of 500 feet of work, 150 feet of which is a cross-cut, and two levels, the upper one over 100 feet in length through an ore-chimney 100 feet long, and varying in width from ten to fifteen inches, and assaying from 75 to 150 ounces silver per ton, and the lower level running through a chimeney sixty feet long, and from six to ten inches wide, of cube galena associated with red blende, assaying from twenty to thirty ounces silver per ton, and after running about thirty feet another chimney was encountered of a higher grade, assaying from 25 to 100 ounces silver per ton, and the pay streak widening to thirty inches.

**Hidden Treasure.**—Crossing the Pitkin Group; 300x1500 feet; situated in Royal Albert Gulch, four and one-half miles south of Ouray, Uncompahgre district; located in August, 1877; owners Wm. Kilpatrick and R. M. McCurray, both Ouray; vein a fissure, with a pay streak fifteen inches wide containing galena, assaying an average of sixty ounces silver per ton, in a quartz gangue; developed by one thirty-foot tunnel and one forty-foot open cut.

**Highland Chief.**—300x1500 feet; situated on the east side of Silver Creek, and on the north point of Buckeye Mountain, six and one-half miles south-west of Ouray, Mt. Sneffles district; located in September, 1875, and patented in March, 1880; owners H. B. Parker, Chicago, L. C. Kilham, Denver, and A. W. Richardson, Ouray; vein a fissure fifteen feet wide, with trachyte walls, and pay streak from ten to twenty inches, containing galena and gray

copper, with some ruby and native silver, in a white quartz gangue, milling, when sorted, thirty per cent lead and eighty ounces silver per ton; developed by one tunnel fifty feet long.

**Holiday Present.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in December, 1882; owners Geo. W. Seaman, Harry B. Adset, Henry W. Hope, and M. W. and W. J. Williams, all Silverton; ore body probably a deposit a ten-foot-face open cut showing mineralized quartz on all sides and galena on the bottom, the other developments being a tunnel twenty feet long designed to cut the ore body forty-five feet from the surface.

**Hoo-Doo.**—300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile north of Red Mountain Town, Red Mountain district; owners Geo. Lynch, D. F. Watson, and Michael O'Riley, all Rogerville; vein probably a fissure, seven feet wide, pay streak sixteen inches, containing galena and chlorides in a quartz gangue; developed by one twenty-five-foot shaft.

**Home-stake.**—300x1500 feet; situated on the west slope of Red Mountain, nine miles south of Ouray, Red Mountain district; located in November, 1882; owners J. M. Jardine, M. S. Corbett, W. S. Home, and W. J. Williams, all Ouray; ore-body probably a deposit, an open cut twenty feet long showing galena, with oxides of copper and iron, in a quartz gangue.

**Hoosier Girl and Richmond.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the east, or Richmond, branch of Imogene Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in 1876, and patented in December, 1882; owner W. W. Stoddard, Ouray; vein a fissure three feet wide, pay streak from four to fourteen inches, containing gray copper, with brittle silver and somewhat of iron and copper pyrites, galena and zinc blende, in a white and blue crystalline quartz gangue, the first-class ore milling, when sorted, 150 ounces silver, and the second-class from twenty-five to seventy-five ounces silver per ton; developed by one tunnel 120 feet long, one shaft twenty-five feet deep, and four open cuts from ten to fifteen feet long; output fifty tons.

**Hope.**—300x540 feet; situated on the west slope of Red Mountain, at Red Mountain Town, Red Mountain district; located in November, 1882; owners Jno. Rogers, Isaac S. Barger, and A. W. Hudson, all Silverton, and S. N. Houghton, Thompson, Ill.; ore body probably a deposit, the developments, one forty-foot tunnel, showing iron pyrites in quartz, and a ten-foot shaft, from end of tunnel, showing mineral all the way, assaying some copper and ten ounces silver per ton.

**Hudson.**—300x925 feet; situated on the west slope of Red Mountain, 500 feet south-east of Red Mountain Town, Red Mountain district; located in August, 1881, and in process of patent; owners Fred C. Sherwin, Silverton, Jno. Mullowney, and Jos. A. Nock, both Red Mountain Town, J. H. Haynes, Telluride, and T. W. Miles, Denver; ore body is a deposit as far as developed, twelve feet wide, and of unknown thickness; the developments—one shaft ninety feet deep, from which a twelve-foot drift is run at depth of forty-eight feet, the latter showing arsenical copper on all sides, milling, when sorted, twenty-four per cent copper, one-half ounce gold, and twenty-nine ounces silver per ton, the before-mentioned shaft cutting a body of iron carbonates at depth of twenty feet, which mills thirty-four ounces silver and some gold per ton.

**Humbolt.**—300x1500 feet; situated on the north slope of Red Mountain, eight miles south of Ouray, Red Mountain district; located in October, 1882; owners J. M. Jardine, L. Parsell, and Jasper Brown, all Ouray; containing four veins (probably fissures), one twenty feet wide running lengthwise and the others crossing it, ten, four, and one foot in width, showing copper oxides in quartz, assaying twenty-five per cent copper and forty ounces silver per ton; developed by one tunnel seventy-six feet long and one thirty-foot open cut.



**Humboldt.**—100x1500 feet; situated on the east slope of Emma Mountain and in Virginius Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in 1877, and patented in March, 1883; owners John Worthington, Clarence May, F. C. Meyer, and John Goodin, all Ouray; vein a fissure six feet wide, pay streak from ten to forty inches, containing quartz and native silver, milling, when sorted, from 100 to 400 ounces silver per ton; developments—150 feet of tunneling and shafting; output twenty tons.

**I. X. L.**—300x1500 feet; situated in Imogene Basin, five miles south-west of Ouray, Mount Sneffles district; located in June, 1879; owners F. C. Meyer and Louis King, both Ouray; vein a fissure four feet wide, pay streak from ten to fifteen inches, containing galena in a quartz gangue, milling thirty-two per cent lead and forty ounces silver per ton; developed by one tunnel fifty feet long.

**Ibex.**—300x1500 feet; situated on the south-east end of Mt. Sneffles, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; owners W. A. Clark, Ouray, and Alexander O'Toole, Providence; vein a fissure four feet wide, pay streak eighteen inches, containing galena and gray copper, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by one thirty-foot shaft and one twenty-foot open cut.

**Ida May.**—300x1500 feet; situated on the west slope of Red Mountain, one-third mile north-east of Red Mountain Town, Red Mountain district; located in November, 1882; owners A. J. Vance, Red Mountain Town, D. J. Shaw, W. D. Warren, John Clinkscales, and Archie Rogers, all Durango, and H. C. Casebolt, Silverton; ore body, probably a deposit, one thirty-five-foot shaft and one thirty-five-foot drift, cutting the bottom of the shaft, both showing galena on all sides for the last seven feet, assaying thirty-five per cent lead and thirty-five ounces silver per ton.

**Imogene Group.**—Four claims, 300x1500 feet each, viz.: Imogene, Pocahontas (an extension of the Hidden Treasure), Chief Deposit, and Caribou; situated on the west slope of Imogene Gulch, and on the east slope of Buckeye Mountain, $\frac{1}{8}$ mile south-west of Ouray, Mt. Sneffles district; located in September, 1875, and patented in March, 1879; owners D. D. Mallory, Baltimore, Francis G. King and L. C. Kilham, both Denver, J. H. King, Painesville, O., A. W. Richardson, Ouray; veins all fissures, from four to eight feet wide with trachyte walls, etc., pay streak in the Pocahontas from eight to thirty-six inches in width, containing galena and gray copper, associated with iron and copper pyrites and red blende, in a white quartz gangue, milling, when sorted, twenty-five per cent lead and seventy ounces silver per ton, and in the other claims the pay streaks are about the same size, and contain a similar kind and quality of vein-matter and mineral; developments—three tunnels, 120, 40, and 25 feet long, respectively, and nine open cuts with faces from ten to twenty-five feet.

**Ingraham.**—Owners A. M. Thompson, Roswell, N. M., and O. F. Ingraham, Colorado City, Colo.; claim 300x1500 feet; situated on the south-west slope of Potosi Mountain, eight miles south of west from Ouray, Mt. Sneffles district; located in August, 1880; vein is a fissure, three and one-half feet wide, pay streak from ten to fifteen inches, containing galena with some brittle silver, in a quartz gangue, milling when sorted, fifty ounces silver and one-half ounce gold per ton; developments—one thirty-foot drift and one tunnel forty feet long, cutting the vein at depth of forty feet.

**International.**—300x1500 feet; situated on the north side of Bear Creek, two miles south of Ouray, Uncompahgre district; located in September, 1880; owners Bell Bros., Ouray, and others, New York City; vein a fissure, forty inches wide, pay streak fourteen inches, containing copper glance in a quartz gangue, milling, when sorted, $90 per ton in silver and gold; developed by three open cuts with faces twelve and fifteen feet and one ten-foot tunnel.

**Irish Girl.**—(See Scotch Girl and Irish Girl Group.)

**Irish Girl and Haines.**—Two claims, 300x1500 feet each; situated on the north slope of Red Mountain, nine miles south of Ouray, Red Mountain district; located September, 1882; owners J. M. Jardine, Graves Jaggers, M. S. Corbett, and W. S. Home, all Ouray; veins both fissures from twenty to forty inches wide, containing quartz, galena, and iron pyrites; developed by two open cuts with ten-foot faces each.

**Iron.**—(See Climax and Iron.)

**Iron Chest.**—300x1500 feet each; situated on the west slope of Red Mountain, eight miles north-west of Silverton, Red Mountain district; located in October, 1882; owners Geo. W. Seaman, M. W. Williams, W. J. Grow, Albert Mayers, and M. J. Murphy, all Silverton; vein probably a fissure, although it may be a deposit, twenty-five feet wide on the surface, and containing from twelve to fifteen inches in width of arsenical copper; developments—one open cut with a fifteen-foot face.

**Iron-clad and Finance.**—Two claims, 300x1500 feet each; situated on the east side of the Uncompahgre River, one mile north of Ouray Uncompahgre district; located in 1880; owners Wm. Weston and Thos. Gibson, both Ouray; ore is hematite iron, sometimes changing to massive copper and iron pyrites, the former however prevailing and having a thickness of from two to three feet, milling forty per cent iron and some gold and silver per ton, appearing in a horizontal ledge from three to eight feet thick at the contact between the sedimentary and volcanic rocks, and outcropping for over 3,000 feet; developed by several open cuts; output forty tons shipped, worth about $12 per ton for fluxing purposes.

**J. A. Dutton.**—300x1500 feet; situated at the head of Red Mountain Valley, one and one-half miles north of Red Mountain Town, Red Mountain district; located in September 1882; owners H. G. Burt, J. A. Dutton, and J. R. Penoier, all Ouray; vein probably a fissure, four feet wide, composed of quartz carrying copper oxides and iron; developments—one tunnel fifty feet long.

**J. B. Grant.**—(See Gov. J. B. Grant Group.)

**J. O. Dexter.**—(See Dexter Mining Company.)

**Jackson.**—(See Kokomo and Jackson.)

**Japan.**—(See Malta, Japan, and Moslem.)

**Jay Gould and Vanderbilt.**—Two claims, 300x1500 feet each; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in October, 1882; owners Buenemann Bros., Ouray, and Perry Terpenning, Red Mountain Town; developments—two years' assessment work and one twenty-foot tunnel, showing galena and some native copper scattered through the vein, which has the indication of being a fissure about eight feet wide.



**Jed Group.**—(The Cave); three parallel claims, 300x1500 feet each; situated on the west slope of Red Mountain, one-fourth mile south-east of Ironton, Red Mountain district; located in March, 1883; owned by M. A. Blackmer and M. H. Gibbs, both Chicago, and G. M. Effinger, Montrose; veins all fissures, as follows: the Jed forty feet wide, pay streak eight feet, containing sulphurets in a decomposed gangue, assaying 200 ounces silver per ton; developed by a drift forty feet long, from end of which is a natural cave 110 feet in length, along which there are large chambers from three to five feet apart, each showing bodies of mineral; Little Nannie fifteen feet wide, containing mineralized quartz; developed by an open cut with a ten-foot face; Little Rosie fifteen feet wide, containing mineralized quartz; developed by a twelve-foot-face cut.

**Jumble.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in January, 1883; owned by B. F. Hyde, V. C. and C. C. Timson, all Red Mountain Town; vein a fissure from eighteen to thirty feet wide, with a pay streak four feet, containing seams of arsenical copper and galena scattered through the vein, in a porphyry gangue; developed by a thirty-two-foot open cut and tunnel, eighteen feet of which is under cover.

**Keystone.**—Owned by Richard J. Corley, Erick Peterson, and Chas. Berg, all Red Mountain Town; claim 300x1500 feet; situated on the west slope of Red Mountain, Red Mountain district; located in February, 1883; vein probably a fissure, five feet wide, containing mineralized quartz carrying galena and arsenical copper; developments—one ten-foot-face cut and one twenty-foot tunnel.

**Kokomo and Jackson.**—Two parallel claims, 300x1500 feet each; situated on the west slope of Red Mountain, one and one-fourth miles north of Red Mountain Town, Red Mountain district; located in October, 1880; owned by D. J. Shaw, W. D. Warren, Jno. Clinkscales, and Archie Rogers, all Durango, Perry Terpenning, Red Mountain Town, and Buenemann Bros., Ouray; ore body probably a deposit, an open cut and tunnel eighteen feet long, six feet of which is under cover, and an open cut with ten-foot face, respectively, on each claim, showing arsenical copper and some galena in a quartz gangue.

**Lackawanna.**—300x1500 feet; situated on the west side of Red Mountain Creek, opposite the Yankee Girl, one and one-half miles west of Red Mountain Town, Red Mountain district; located in February, 1883; owners C. M. Osman, Jno. Miles, Daniel and Pat Fitzgerald, and H. Roach, all Silverton; vein probably a fissure, six feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and thirty ounces silver per ton; developments—one ten-foot shaft.

**Last Chance, Bluebird, and Lookout.**—Three claims, 300x1500 feet each; situated on the east side of the Uncompahgre River, five miles north of Ouray, Uncompahgre district; located in 1879; owners Emile Charest and Daniel McDonald, both Ouray; vein a horizontal contact five feet thick, through which is scattered galena and lead carbonates, assaying forty ounces silver per ton; developed by one tunnel sixty feet long and two open cuts, twenty-five and thirty feet long each.

**Laura Dunsmore.**—300x1500 feet; situated on the west slope of Red Mountain, nine miles south of Ouray, Red Mountain district; located in August, 1878; owners S. E. Church, New York City, and Richard Logan, San Miguel City; ore body probably a deposit, one fifty-foot open cut and one twenty-foot tunnel, with a ten-foot shaft from the bottom of the tunnel, showing

yellow and gray copper and copper glance in a quartz gangue for a thickness of twenty feet, assaying from twelve to twenty-five per cent copper and from five to fifty ounces silver per ton.

**Legal Tender.**—(See Spanish Dollar and Legal Tender.)

**Leviathan and Cliff.**—Two claims, 300x1500 feet; situated on the east slope of Bear Mountain, two miles west of Red Mountain Town, Red Mountain district; located in July, 1882; owners W. E. Earl, E. T. Sweet, C. C. Clemons, and S. Tomer, all Silverton; veins both fissures, six and four feet wide, respectively, with pay streaks twenty-six and sixteen inches in width, containing galena in a quartz gangue, milling, when sorted, seventy per cent lead and thirty ounces silver per ton; developments—one thirty-two-foot tunnel and one eleven-foot-face cut, respectively, on each claim; output from former 100 tons.

**Little Florence.**—300x1500 feet; situated on the east side of the Uncompahgre River, three-fourths mile south of Ouray, Uncompahgre district; located in August, 1876; owners Jno. O. Lindquist, Ouray, and Rodney Curtis, Denver; vein a fissure four feet wide, pay streak twenty inches, containing galena, iron and copper pyrites, and zinc blende, with some wire silver, assaying forty ounces silver per ton, in a quartz gangue; developed by one twenty-five-foot tunnel and one fifteen-foot-face open cut; adjoining which claim is the Little Florence Mill site of five acres, located at the same time and owned by the same parties.

**Little Josie.**—300x1500 feet; situated in White House Basin, seven miles south-west of Ouray, Mount Sneffles district; located in July, 1882; owners John Northway, Joseph Sampson, and Wm. Hudson, all Ouray; vein a fissure five feet wide, pay streak twenty-six inches, containing quartz, galena, and gray copper, assaying twenty-five ounces silver per ton; developed by one fifteen-foot tunnel.

**Little Maud.**—(See Old Reliable Mining Company.)

**Little Maud.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in December, 1882; owners Otis Ballou, Silverton, J. P. Lindsly, E. D. Morgan, L. R. Robinson, J. E. Schutt, and Asy. McGregor, all Durango; ore body probably a deposit, one shaft fifty-eight feet deep, showing arsenical copper, similar to Orphan Boy ore, which assays twelve per cent copper, one ounce gold, and fifteen ounces silver per ton.

**Little Sunbeam.**—Owned by J. Irvine Coleman, George Ross, and ___ Miller, all Telluride; claim 300x1500 feet; situated on the west side of Red Mountain Creek, three-fourths mile from Ironton, Red Mountain district; located in March, 1883; vein probably a fissure, at least five feet wide, pay streak eighteen inches, containing talc, carrying bunches of galena, on which one assay showed one-fourth ounce gold and 206 ounces silver per ton; developed by a cut with a fifteen-foot face and a twenty-foot tunnel from end of cut.

**Lone Star.**—300x1500 feet; situated on the north side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in May, 1880; owner W. H. Fourrell, Ouray; vein a fissure eight feet wide, pay streak six inches, containing galena and gray copper, assaying seventy-five ounces silver per ton, in a quartz gangue; developed by one open cut and tunnel forty-five feet in length.



**Lone Star.**—200x1200 feet; situated on the west slope of Red Mountain, seven miles north-west of Silverton, Red Mountain district; located in 1882; owners R. I. Bruns and Geo. A. Tinker, both Silverton, and E. C. Sherer Durango; ore body probably a deposit, one fifty-foot shaft showing arsenical copper similar to Hudson ore, in a quartz gangue.

**Lulu.**—(See Emma and Lulu.)

**Madison and B. F. Riqua.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north-west slope of Stony Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in August, 1877, and June, 1876, respectively; owners E. A. Howard and J. B. Frogley, both Ouray; vein a fissure, five feet wide, pay streak fifteen inches, containing galena and gray copper, with ruby and brittle silver, assaying from 150 to 200 ounces silver per ton, in a quartz gangue; developed by two open cuts with faces from ten to twenty feet.

**Malta, Japan, and Moslem.**—Three adjoining claims on the same vein, 300x1500 feet each; situated on Cañon Creek, two miles from Ouray, Uncompahgre district; vein a fissure, ten feet wide, with trachyte walls, the vein-matter being porphyry with a clay gouge, and the ore of two characters, first, a fine-grain galena, assaying fifty per cent lead and twenty ounces silver per ton, this mineral streak varying in width from ten to thirty-six inches, in addition to which there is forty inches of quartz, carrying the same galena with some native and brittle silver scattered through it; developments—two tunnels thirty-seven and seventy-five feet long and several open cuts.

**Manifold.**—300x1500 feet; situated on the west slope of Red Mountain, two miles north of Red Mountain Town, Red Mountain district; located in June, 1882; owners A. Johnson, N. G. Jarrard, and Giles Vandegrift, all Chattanooga, R. J. Waklin and Frank Stubbs, both Silverton; vein probably a fissure, eight feet wide, containing quartz carrying galena and arsenical copper in seams; developed by a thirty-seven-foot tunnel.

**Mary Fullerton.**—300x1500 feet; situated on the east side of the Uncompahgre River, adjoining Ouray, Uncompahgre district; located in April, 1882; owners Dr. W. W. Rowan and Dr. Alex. Hazard, both Ouray; vein a fissure thirty inches wide, pay streak six inches, containing quartz with iron pyrites, assaying four ounces silver and $12 gold per ton; developed by one tunnel twenty feet long.

**Mary Hayden No. 2 and Milwaukee.**—Two claims, 300x1500 feet each; situated on the east slope of Cline Mountain, four miles south of Ouray, Uncompahgre district; located in 1875 and 1882, respectively, and in process of patent; owners A. E. Long, Luther Harris, and Martin Shultis, all Ouray; vein a fissure ten feet wide, pay streak twenty-four inches, containing copper and iron pyrites, assaying twenty-five per cent copper and from 50 to 100 ounces silver per ton, in a quartz gangue; developed by one tunnel 112 feet long, cutting vein at a depth of 200 feet, with some other workings.

**Matchless.**—300x1500 feet; situated in Potosi Basin, seven miles south-west of Ouray, Mt. Sneffles district; located in April, 1882; owners R. W. Haskins and W. E. Block, both Ouray; vein a fissure three feet wide, pay streak seven inches, containing gray copper, assaying 125 ounces silver per ton, in a quartz gangue; developed by two open cuts with twelve and ten foot faces.

**Maud S.**—300x1500 feet; situated on the west slope of Red Mountain, one mile south-west of Red Mountain Town, Red Mountain district; located in November, 1882; owners E. H. Stanton, Red Mountain Town, and J. D. Rollins, Silverton; ore body probably a deposit, one ten-foot-face cut showing galêna and gray copper in the quartz on all sides.

**Mayflower.**—300x1500 feet; situated on the south-east slope of Hardin Mountain, four miles south of Ouray, Uncompahgre district; located in May, 1879; owners W. H. Fourrell and M. N. and M. H. Funk, all Ouray; vein a fissure five feet wide, pay streak eleven inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 101 ounces silver and two ounces gold per ton; developed by one twenty-eight-foot shaft and one thirty-foot tunnel.

**Millburn.**—300x1500 feet; situated on the west side of the Uncompahgre River, two and one-half miles south of Ouray, Uncompahgre district; located in January, 1881; owner Jno. Castano, Ouray; vein a fissure forty inches wide, containing galena, with some ruby silver, and iron and copper pyrites, assaying thirty-five ounces silver per ton, in a quartz gangue; developed by one thirty-foot shaft.

**Millionaire.**—300x1500 feet; situated in Imogene Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in 1876, and patented in 1882; owners Dr. Alex. Hazard, Ouray, and B. R. Keim, Rico; vein a fissure three feet wide, pay streak from ten to sixteen inches, containing galena and gray copper, with brittle silver, in a white quartz gangue, milling, when sorted, about 150 ounces silver per ton; developed by one tunnel 110 feet long; output $10,000.

**Milwaukee.**—(See Mary Hayden No. 2 and Milwaukee.)

**Mineral Farm.**—(See Norfolk and Ouray Mining and Smelting Company.)

**Minnie B.**—300x1500 feet; situated on the south slope of Potosi Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in July, 1877; owners E. A. Howard and J. B. Frogley, both Ouray; vein a fissure five feet wide, pay streak from five to eight inches, containing galena, with some brittle silver, assaying 225 ounces silver per ton, in a quartz gangue; developed by thirty-five feet of tunneling and one fifteen-foot-face open cut.

**Mogul.**—300x1500 feet; situated between Sneffles Creek and the foot of Cumberland Basin, seven miles south-west of Ouray, Mount Sneffles district; located in August, 1876; owners Buenemann Bros., Ouray, and Perry Terpenning, Red Mountain Town; vein a fissure five feet wide, pay streak twenty-two inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by two tunnels seventy and twenty feet long, respectively.

**Moltke Group.**—Five claims 300x1500 feet each, viz.: Moltke, Will-o'-the-Wisp, Eclipse, Torpedo, and Clara; situated on the south slope of Potosi Mountain, six and one-half miles south-west of Ouray, Mount Sneffles district; located in 1876; owners Guy. C. Nobles, St. Albans, Vt., and Herman Stark, Uncompahgre; veins all fissures five feet wide each, pay streaks from five to eight inches, containing galena, assaying twenty-five ounces silver per ton in a quartz gangue; developments—one cross-cut 120 feet long and forty feet of drifting on the Moltke, and ten-foot-face open cut on each of the others.



**Monarch.**—300x1500 feet; situated on the west slope of Mount Abraham, eight miles south of Ouray, Red Mountain district; located in September, 1882; owner Wm. H. Fay, Ouray; vein a fissure four feet wide, pay streak ten inches, containing antimonial silver, assaying from 75 to 100 ounces silver per ton, in a quartz gangue; developed by one twelve-foot-face open cut and one twenty-five-foot shaft.

**Mona's Isle.**—300x1500 feet; situated on the north-east slope of Red Mountain, eight miles south of Ouray, Red Mountain district; located in January, 1883; owners J. M. Jardine, A. Parsell, Wm. Gale, and Ed. Kinley, all Ouray; vein a fissure five feet wide, pay streak eighteen inches, containing galena and gray copper, assaying twenty per cent copper and twenty ounces silver per ton, in a quartz gangue; developed by one open cut fifteen feet long, with a ten-foot face.

**Monday, Tuesday, and Bully Boy.**—Three claims, situated on the east side of the Uncompahgre River, adjoining Ouray, Uncompahgre district; located in January, 1883; owners Geo. R. Todd and James A. Drummond, both Ouray; vein a horizontal contact five feet thick, containing galena, zinc blende, and copper and iron pyrites, assaying from $20 to $100 per ton, in a porphyry gangue; developed by two open cuts and tunnels forty and thirty feet long and one open cut twenty feet long.

**Monitor.**—300x1500 feet; situated on the west slope of Red Mountain, seven and one-half miles north-west of Silverton, Red Mountain district; located in December, 1882; owner G. P. Renstrom, Silverton; ore body probably a deposit, a ten-foot shaft showing arsenical copper and iron across the entire bottom.

**Mono.**—300x1500 feet; situated on the east side of Bear Creek, three miles south-east of Ouray, Uncompahgre district; located in May, 1878, and patented in December, 1882; owner W. H. Fourrell, Ouray; vein a fissure six feet wide, pay streak six inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 110 ounces silver per ton; developed by two tunnels twenty-eight and thirty-five feet long.

**Monongahela.**—(An extension of the Virginius); 300x1500 feet; situated on the north slope of Mt. Sneffles, eight miles south-west of Ouray; located in 1876, and in process of patent; owners Geo. Sisson, H. F. Blythe, and Chas. Munn, all Ouray; vein a fissure from four to five feet wide, pay streak from ten to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty-five per cent lead and from 100 to 150 ounces silver per ton; developed by three tunnels, 350, 300, and 200 feet long, respectively, and 100 feet of winzes, in driving which without any stoping $3,000 was taken out.

**Montreal City.**—300x1500 feet; situated on the west slope of Red Mountain, seven and one-half miles north-west of Silverton, Red Mountain district; located in 1881; owners Ben Harwood, Frank T. Rodd, Louis Blanchard, and Ed. Lewis, all Silverton; vein probably a fissure twelve feet wide, pay streak twenty-four inches, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and twenty-five ounces silver per ton; developed by a tunnel twenty-five feet long, cutting the vein twenty feet deep.

**Mount Sneffles Mining and Reduction Company (The).**—Incorporated under the laws of Colorado, in July, 1879; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, D. D. Mallory, Baltimore; vice-president, Francis G. King; secretary and treasurer, L. C. Kilham—both Denver; manager, A. W. Richardson, Ouray; offices

Denver and Ouray; owns five claims, 300x1500 feet each, viz.: Seven-Thirty and Potosi (the latter being an extension of Wheel of Fortune); situated on the south and north sides, respectively, of Sneffles Creek; Highland Lassie also on the south side of Sneffles Creek, Circassian at the junction of Sneffles and Virginius Creeks, and the Buckeye Girl situated in Imogene Basin, from six to eight miles south-west of Ouray, Mount Sneffles district; located in 1875 and 1876, and patented in March, 1879; veins all fissures from two to twelve feet in width; in the Potosi about six feet wide, having soft porphyry for vein-matter and a very light white quartz as the gangue of the ore, the character of the latter being about the same as in the Wheel of Fortune, except that it has associated with it pink manganese spar, and also arsenical iron pyrites with a bright yellow powder, the result of its decomposition, the pay streak varying from four to twenty inches in width, milling, when sorted, probably an average of three-tenths ounces gold and 100 ounces silver per ton, but some of it can be sorted to run as high as one ounce gold and 250 ounces silver per ton; the developments consisting of one tunnel 155 feet long and one forty-foot shaft, both in ore; in the other claims the pay streaks range from one to sixteen inches in width, and contain gray copper, galena, ruby silver, iron and copper pyrites, and zinc blende, in a white quartz gangue, assaying from 50 to 100 ounces silver per ton; developed by seven tunnels from 12 to 300 feet in length, two cross-cuts fifty feet long each, four open cuts with faces from ten to fifteen feet; output 100 tons from Potosi lode.

**Mountain-lion.**—300x1500 feet; situated in Corbett Creek Basin, five miles west of Ouray, Uncompahgre district; located in September, 1882; owners E. T. Haughey and Jno. Johnstone, both Ouray; vein a fissure thirty feet wide, pay streak twelve inches, containing galena, assaying thirty-six ounces silver per ton, in a quartz gangue, adjoining which is six feet of mineralized quartz; developments—one ten-foot-face open cut.

**Mountain-lion.**—300x1500 feet; situated on the north side of Bear Creek, four miles south-east from Ouray, Uncompahgre district; located in June, 1876; owner Richard Cogar, San Miguel City; vein a fissure, ten feet wide, pay streak from twenty to twenty-six inches, containing quartz carrying brittle silver, milling, when sorted, 100 ounces silver per ton; developed by one twelve-foot open cut and one thirty-foot tunnel.

**Mountain Quail.**—300x1500 feet; situated on Engineer Mountain, five miles from Ouray, Uncompahgre district; located in 1880; vein a fissure, five feet wide, containing pockets of galena, iron pyrites, gray copper, and sulphurets, assaying forty ounces silver per ton; developments—one twenty-five-foot tunnel.

**Mowhawk.**—300x1500 feet; situated on the east slope of Treasure Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in 1876; owners Eugene McCarthy, Patrick Stanley, and Michael Dermody, all Silverton; vein a fissure, four feet wide, pay streak from twenty to thirty-two inches, containing galena and some brittle silver, assaying an average of sixty ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut and one forty-five-foot tunnel.

**Muldoon.**—300x1500 feet; situated on Sneffles Creek, seven miles south-west of Ouray; located in August, 1881; owners J. M. Mackey, N. J. Downer, and Fred. Wells, all Ouray; vein a fissure, forty inches wide, containing quartz streaked with galena and gray copper, milling, when sorted, thirty-two ounces silver per ton; developed by one sixty-foot cross-cut tunnel and some other workings.



**National Belle.**—Owned by Jas. Abrams, R. L. Wood, Richard Journey, M. F. Hovey, Michael Real, and Wm. Pye, all Red Mountain Town; claim 300x1500 feet; situated on the west side of Red Mountain Creek, one-quarter mile north of Red Mountain Town, Red Mountain district; located in September, 1882; vein probably a fissure, from eight to ten feet wide, containing galena and soft and lead carbonates, in a decomposed gangue, milling, when sorted, fifty-five per cent lead, ten per cent copper, $5 gold, and forty ounces silver per ton; developed by a tunnel fifty feet long, cutting the vein forty feet deep, one drift twenty-five feet long, 800 feet from which the vein is again opened up, showing eight feet of mineral the same as described.

**Neptune.**—300x1500 feet; situated on the south slope of Potosi Mountain, six and one-half miles south-west of Ouray, Mount Sneffles district; located in 1876; owners David Frakes and N. J. Downer, both Ouray; vein a fissure ten feet wide, pay streak thirty inches, containing manganiferous quartz, galena, white iron, and a little copper pyrites, assaying from twenty-five to seventy-five ounces silver per ton; developed by one thirty-two-foot-shaft.

**Nevada.**—300x1500 feet; situated on the south-east slope of Potosi Mountain, eight miles south-west of Ouray, Mount Sneffles district; located in 1878, and in process of patent; owners C. H. Rawles, W. D. Wheeler, F. P. Sanborn, and Abraham Cutler, all Ouray; vein a fissure ten feet wide, of quartz, containing streaks of brittle silver and steel galena, assaying from 100 to 150 ounces silver per ton; developed by one thirty-foot tunnel and one twelve-foot shaft.

**Newport (Ky.) Syndicate.**—Composed of G. W. Robson, Sr., and others, Newport, Ky.; manager, W. F. Johnson, Pandora; owns five claims, 300x1500 feet each, viz.: H. W. Robson and Emma J. Goddis, two adjoining claims on the same vein, and W. H. Robson; situated on the south slope of Buena Vista Mountain, four miles south-east of Ouray, Uncompahgre district; located in October, 1880; veins both fissures, six and three feet wide, respectively, pay streaks twelve and eighteen inches wide, respectively, containing galena and gray copper, assaying $30 per ton, in a quartz gangue; developed by eighty-five feet of open cuts and tunneling; Eva Maud and Francis L. Harm, situated on the east slope of Monument Mountain, two and one-half miles west of Ouray, Uncompahgre district; located in September, 1880; veins both fissures, from two to six feet wide, pay streaks from four to fourteen inches, containing galena with some silver glance, in a quartz gangue, milling, when sorted, $100 per ton; developed by fifty feet of open cuts and tunneling on each claim.

**Non-such.**—300x1500 feet; situated on the west side of Cañon Creek, one-fourth mile south of Ouray, Uncompahgre district; located in 1877; owners J. R. Letcher, Ouray, and Chas. Van Pelt, Lamar, Mo.; vein a fissure five feet wide, pay streak four inches, containing galena, gray copper, and iron, assaying $40 per ton, in a quartz gangue; developed by one tunnel sixty feet long.

**Nora and Trouble.**—Two claims, 300x1500 feet each; situated on the west slope of Potosi Mountain, eight miles south-west of Ouray, Mount Sneffles district; located in November, 1881; owners A. C. Yost, Wm. J. Hasley, and Frank Englehart, all Ouray; veins both fissures, from ten to thirty inches wide, containing galena and gray copper, with some ruby and brittle silver, assaying from 100 to 200 ounces silver per ton, in a quartz gangue; developed by one open cut and tunnel sixty-five feet long and one tunnel twenty feet long.

**Norfolk and Ouray Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in March, 1878; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, John L. Roper; secretary, W. A. S. Taylor; treasurer, George W. Bain—all Norfolk, Va.; superintendent, M. S. Corbett, Ouray; office Norfolk, Va., and Ouray, Colo.; owns the Mineral Farm, consisting of four parallel claims numbered from one to four and 300x1500 feet each, except No. 4, 200 feet wide; situated on Cañon Creek, one mile south of Ouray Uncompahgre district; located in 1876, and patented; ore body appears to be a deposit lying on the surface of a limestone bed, similar to those of Barat, Hungary, from five to fifteen feet thick, and extending more or less over the greater portion of the forty acres, the ore being of different kinds—first, a bright, fine galena, assaying about twenty-five per cent lead and ninety ounces silver per ton, second, a gray copper in a baryta gangue, milling sometimes as high as 400 ounces silver per ton, and a low-grade galena carrying antimony and about twenty ounces silver per ton, besides iron and copper pyrites, the matrix of the metal being of two kinds, quartz porphyry and baryta, and the average mill-runs, after sorting, showing about four per cent copper, twenty-five per cent lead, and thirty-five ounces silver per ton, under which deposit fissure veins probably exist; the developments consisting of extensive surface-workings, the mineral taken out having been quarried from the surface; improvements—a heavy-geared flat rope engine (Fraser & Chalmers, Chicago, makers), with the necessary buildings; Gray Squirrel, Forest Belle, and Smuggler, three claims, 300x1500 feet each, the last better known as Iron Mine; situated at the base of Hardin Mountain, one mile south of Ouray, adjoining the Mineral Farm; located in 1878, and Forest Belle patented; veins probably fissures, the formation being similar to that of the Mineral Farm, three feet wide, containing quartz carrying gold, and assaying from $50 to $75 per ton; developed by two tunnels forty-five and twenty-five feet long, respectively, on the two former, and considerable surface-working on the latter, done in taking out about 200 tons of iron ore; St. Louis Silver Belt, Demonetizer, and Little Annie; situated near Mineral Point, Uncompahgre district; located in 1876; veins all fissures from five to seven feet wide, pay streaks from ten to twenty inches, containing galena and quartz, assaying in the Demonetizer twenty-five per cent lead and seventy-five ounces silver per ton; developed by one shaft forty feet deep and two open cuts forty feet long each; and other prospects, on which some development work has been done, and the Snow-drop, J. B., and Arctic. (See San Miguel County.)

And a smelter, situated on the Uncompahgre River, one and one-half miles north of Ouray, building 45x130 feet; containing Blake Crusher and Cornish Rolls motive power supplied by water; capacity twenty tons per day; and a concentrating-works and stamp-mill, building 40x70 feet, containing Blake Crusher, eight Frue Vanners, and twenty Stamps; situated on the Mineral Farm property, and built by Fraser & Chalmers, Chicago, Ills.

**Old Abe.**—300x1500 feet; situated on Treasure Hill, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; owner W. A. Clark, Ouray; vein a fissure, four feet wide, pay streak eighteen inches, containing galena and gray copper, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by one open cut and tunnel forty feet long.

**Old Reliable.**—(See Banner Group.)

**Old Reliable Mining and Reducing Company (The).**—Incorporated under the laws of Colorado, in 1878; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, —— Morse; secretary, M. B. Merriman—both Hannibal, Mo.; manager, H. A. Hilton, New York City; agents, Bell Bros., Ouray; offices Hannibal, Mo., and Ouray; owns four claims, 300x1500 feet each, viz., Little Maud, Mountain Queen, Little Fraud, and Big Fraud; situated on Bear Creek, three and one-half miles south-east of Ouray, Uncompahgre district; located from 1875 to 1878, and the Little Fraud patented in 1882; veins all fissures from one to four feet wide, pay streaks ten inches, containing iron pyrites and galena with brittle silver and some copper in a quartz gangue, milling, when sorted, sixty ounces silver per ton; developed by 1,000 feet of shafting and tunneling.



**Old Stand-by.**—300x1500 feet; situated on the west side of the Uncompahgre River, five miles south of Ouray, Uncompahgre district; located in October, 1882; owner S. H. Woodcock, Ouray; vein a fissure, four feet wide, containing quartz with galena, iron and copper pyrites; developed by two open cuts fifteen and eleven feet.

**Ophir.**—300x1500 feet; situated on Cañon Creek, a few hundred feet from the Trout and Fisherman property, Uncompahgre district; vein a fissure, with altered-sandstone wall rock, and a pay streak from ten to fifteen inches wide, containing gray copper and iron and copper pyrites, with a little galena scattered through it, and the blue and green carbonates of copper, the matrix of the mineral being quartz porphyry, milling, when sorted, an average of 100 ounces silver per ton, but selected lots of first-class ore have run as high as 1,200 ounces silver per ton; developments consisting of one shaft in ore all the way, sometimes twenty-two inches in width.

**Ophir.**—300x1500 feet; situated on the east side of Bear Creek, three and one-half miles south-east of Ouray, Uncompahgre district; located in July, 1876; owner W. H. Fourrell, Ouray; vein a fissure, eight feet wide, pay streak seven inches, containing yellow and gray copper in a quartz gangue, milling, when sorted, sixteen per cent copper and ninety-eight ounces silver per ton; developed by one fifty-foot tunnel.

**Oro-Cash.**—300x1500 feet; situated on the west side of Uncompahgre River, four miles north of Ouray, Uncompahgre district; located in April, 1882; owners A. E. Baker, V. B. Scheid, and H. G. Bird, all Ouray, and Allison H. DeFrance, Golden, and others; vein a fissure, thirty inches wide, containing sulphurets and quartz, assaying thirty ounces silver per ton; developed by one forty-foot level.

**Orphan Boy.**—(See Yankee Girl Mining Company.)

**Orphan Boy.**—300x1500 feet; situated on the south side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in August, 1878; owners Joseph Papillon and Mrs. Andrew Pierce, both Ouray; vein a fissure, four feet wide, pay streak three feet, containing galena and gray copper, with some brittle silver, assaying sixty-eight ounces silver per ton, in a quartz gangue; developed by one thirty-foot tunnel.

**Oscar.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-fourth miles north of Red Mountain Town, Red Mountain district; located in November, 1882; owners D. J. Shaw, Archie Rogers, W. D. Warren, and Jno. Clinkscales, all Durango, Jno. Miles, Wallis Wilson, and Robert McNichols, all Silverton, Perry Terpenning, Red Mountain Town, and Buenemann Bros., Ouray; ore body probably a deposit, one open cut and tunnel twenty-five feet long and one shaft fifteen feet deep showing galena in a quartz gangue, assaying twenty per cent lead and twenty ounces silver per ton.

**Osprey Mining and Milling Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each; president, Abram Wakeman; vice-president, Jno. Cummings—both New York City; manager, Joseph Van Doren, Ouray; offices

Bennett Building, New York, and Ouray, Colo.; owns Osprey, New York, Brooklyn, Wakeman, and another claim, 300x1500 feet each; situated on the north slope of Hardin Mountain, three miles south of Ouray, Uncompahgre district; located in 1880, and the Osprey in process of patent; veins all fissures, from one to five feet in width, pay streaks from two to thirty inches, containing galena and gray copper, assaying from fifty to seventy-five ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five and thirty feet long and six shafts ten feet deep each.

**Ottawa.**—300x1500 feet; situated on the west side of Diamond Creek, five and one-half miles south of Ouray, Uncompahgre district; located in September, 1879; owners J. O. Davis, D. C. Hartwell, Dr. W. W. Ashley, and others, all Ouray; vein a fissure five feet wide, pay streak fourteen inches, containing galena, assaying thirty-five per cent lead and from thirty to forty ounces silver per ton, in a quartz gangue; developed by one tnnnel thirty-five feet long.

**Ouray.**—300x1500 feet; situated at Ouray, Uncompahgre district; located in January, 1883; owners Jno. Godin and W. D. Laty, both Ouray; vein a fissure five feet wide, pay streak twenty-four inches, containing galena with some brittle silver and silver glance, assaying from 150 to 200 ounces silver per ton, in a quartz gangue; developed by an open cut and tunnel twenty-five feet long.

**Ouray, Belle of.**—300x1500 feet; situated on Bear Creek,about four miles from Ouray, Uncompahgre district; vein a fissure eight feet wide, containing an ore and gangue similar to the Union, assaying from $50 to $1,000 per ton, and the developments consisting of over 800 feet of work.

**Ouray Mining and Discovery Company.**—(See Lake County); owns a one-half interest in the Red Mountain Park placers (see Red Mountain Park placers), three lode claims,300x1500 feet each,viz.: Dragon,Bertie, and Little Ida, adjoining the Red Mountain Park placers, Uncompahgre district; located in 1878; veins all fissures, varying in width as shown by a drift on the Bertie vein, designed to cut the Dragon vein at great depth, besides some other workings showing a very fair material and improving with depth; a one-fourth interest in the Portsmouth, E. L. Martin, Grand Pacific, and all the Amphitheater, four adjoining claims on the same vein, one-fourth interest in the Cannon, and all the Ada, Oscar, Litchfield, and Doggett, four adjoining claims on the same vein, and one-fourth interest in the Mountain Belle, Ed. Lynde, and Carrie, all 300x1500 feet each; situated in the Uncompahgre district, near Ouray; located in July and August, 1879; veins all fissures, that of the Cannon, Ada, Oscar, and Litchfield over twenty feet wide, and all containing a fair material, assaying sometimes as high as $250 per ton; the developments consisting of assessment work and a tunnel of considerable length, run on the Mountain Belle vein and designed to cut the Ada vein at great depth; adjoining which claims is the Ouray placer, 160 acres, in which the Company owns a five-eighths interest; improvements—one good cabin and some surface-workings, and the Black Diamond and Santa Clara lodes, in which the Company owns a three-fourths interest, 300x1500 feet each, situated in Mt. Sneffles Basin, about eight miles from Ouray, Mt. Sneffles district; located in 1876, and patented; veins both fissures, varying in width, containing a very fair material; the developments consisting of a sixty-foot tunnel and forty-foot shaft on the former, and one tunnel 110 feet long on the latter; improvements—ore-houses, cabins, etc.

**Ouray Union Mining Company (The).**—Incorporated under the laws of New York, in July, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, J. Berlin; secretary and treasurer, Wm. M. Long—both New York City; manager, F. A. Wilde, Ouray; offices 33 Wall street, New York, and Ouray, Colo.; owns two claims, 300x1500 feet each, and one claim 300x400 feet, viz.: the Union, Monitor (crossing the Union at right angles), and Standard; situated on the south slope of Hardin Mountain, four miles south of Ouray, Uncompahgre district; located in 1876, and patented in December, 1881; veins all fissures from three to six feet wide, pay streak in the Union from three to thirty inches, containing pockets, or bunches, of antimonial silver associated with iron pyrites and separated by barren spots of quartz gangue-matter, milling, when sorted, from 100 to 140 ounces silver and probably one ounce gold per ton, and in the Monitor the ore is similar but of a somewhat higher grade; developed by three tunnels, 450, 290, and 150 feet long, respectively, three levels aggregating 1,350 feet, two cross-cuts aggregating 250 feet in length, and an eighty-foot shaft; output sixty tons shipped, with 200 tons on the dump awaiting cheaper freights.



**Pacific and Capital.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Oak Creek Basin, five miles west of Ouray, Uncompahgre district; located in May, 1881; owner E. T. Haughey, Ouray; vein a fissure from six to sixteen feet wide, pay streak twelve inches, containing galena with some brittle silver, assaying thirty-six ounces silver per ton, in a quartz gangue; developed by two drifts twenty feet long each, one on each claim.

**Painters.**—(See Comstock and Painters.)

**Palo.**—(See Una Group.)

**Parsons and Gertrude.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west side of the Uncompahgre River, two and one-half miles south of Ouray, Uncompahgre district; located in May, 1876; owners F. G. Burnett and Jno. Castano, both Ouray (Nathan Caple, Ouray, and V. Paton, Saguache, are owners in the latter); vein a fissure four feet wide, containing galena, with some native and wire silver, iron and copper pyrites, in a quartz gangue, milling, when sorted, forty-five ounces silver per ton; developed by two open cuts with thirty and twenty-five foot faces and one twenty-foot tunnel on the former, and one ninety-six-foot tunnel and one open cut and tunnel twenty-five feet long on the latter; output 150 tons.

**Pay-master.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile south of Ironton, Red Mountain district; located in December, 1882; owned by Alex Gould, Daniel A. McDonald, and A. M. De France, all Ouray, and D. J. Shaw, Durango; vein is probably a fissure, ten feet wide, pay streak thirty inches, containing arsenical copper and some galena, assaying from fifteen to twenty per cent copper and fifty ounces silver per ton, in a quartz gangue; developed by an open cut and tunnel twenty-five feet long, twelve feet of which is under cover.

**Pilot, Hermit, and Woodchuck.**—Three claims, 300x1500 feet; situated on the north-west slope of Old Stony Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; owner Mrs. C. H. Rawles, Ouray; veins all fissures from four to five feet wide, pay streaks eight inches, containing steel galena, with ruby, brittle, native, and wire silver, in a quartz gangue, milling, when sorted, from 100 to 150 ounces silver per ton; developed by one thirty-five-foot shaft, one thirty-five-foot tunnel, and one cross-cut sixty feet long, designed to cut all the above veins; output five tons.

**Pitkin Group.**—Six claims, 300x1500 feet each, viz.: Royal Albert, Royal Consort, Duke of Edinburgh, Mountain Monarch, Mickey Breen, and Mother Cline; situated on the Uncompahgre River, four and one-half miles south of Ouray, Uncompahgre district; located in 1875, and the first three pat-

ented in 1879; owners F. W. Pitkin, Pueblo, and Wm. Sherman, Milwaukee; veins all fissures, in the first three six feet wide, with a pay streak twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, sixteen per cent copper and from 50 to 150 ounces silver per ton; developed by one tunnel 100 feet long; in the Mountain Monarch and Mickey Breen four feet wide, pay streak ten inches, containing galena, assaying fifty per cent lead and 120 ounces silver per ton; developed by two tunnels seventy-five and fifty feet long; and in Mother Cline vein fifteen feet wide, pay streak four feet, containing galena in a quartz gangue, assaying fifty per cent lead and fifteen ounces silver per ton; developed by one twenty-foot shaft and several openings on the vein; output 100 tons.

**Pittsburgh.**—300x1500 feet; situated on Red Mountain Creek, near the Orphan Boy, eight miles from Ouray, Red Mountain district; owners Buenemann Bros. and Jay Brown, all Ouray, and Perry Terpenning, Red Mountain Town; ore body probably a deposit, one year's assessment work showing galena scattered through the vein-matter.

**Planet Group.**—Three claims, 300x1500 feet each, viz.: Planet, Comet, and Independence; situated in Silver Basin, eight and one-half miles south-west of Ouray, Mt. Sneffles district; located in 1879; owners M. D. Cooper, Ouray, and Geo. R. Porter, Sneffles; veins all fissures from two to eight feet wide, pay streak from ten to fourteen inches, containing galena and gray copper, with some brittle silver, in a quartz gangue, milling, when sorted, seventy ounces silver per ton; developed by two tunnels thirty-five feet long each and three open cuts with ten-foot faces each.

**Plutus.**—300x1500 feet; situated on the west bank of the Uncompahgre River, near the Grand View, one-half mile from Ouray; vein a fissure, having a formation and mineral contents so similar to those of the Grand View that they have in all probability the same origin.

**Pocahontas.**—(See Imogene Group.)

**Polander Mining Company (The).**—Incorporated under the laws of Colorado, in —— 1882; treasurer, L. W. Goss, Cincinnati, Ohio; owns the Polander, 300x1500 feet; situated on the east slope of Engineer Mountain, five miles south-east of Ouray, Uncompahgre district; located in March, 1881, and in process of patent; vein a fissure five feet wide, pay streak from ten to fourteen inches, containing galena, copper pyrites, and black sulphurets, in a quartz gangue, milling, when sorted, seventy-five ounces silver per ton; developed by a drift on the vein 125 feet long, with some other workings.

**Poor Man.**—(See Champion Group.)

**Potomac.**—300x1500 feet; situated on the north side of Bear Creek, three miles south-east of Ouray, Uncompahgre district; located in 1875; owners C. B. Dudley, Ouray, and the estate of A. C. Pierce; vein a fissure four feet wide, pay streak from twenty to twenty-five inches, containing galena and copper and iron pyrites, assaying from 25 to 100 ounces silver per ton, in a quartz gangue; developed by one tunnel forty feet long.

**Potosi.**—(See Mt. Sneffles Mining and Reduction Company.)

**Prickly.**—300x1500 feet; situated on the east side of Uncompahgre River, five miles south of Ouray, Uncompahgre district; located in May, 1882; owners M. J. Silvia and Jos. Enos, both Ouray; vein a fissure thirty inches



wide, pay streak nine inches, containing galena, gray copper, and some sulphurets, assaying $130 per ton, in a quartz gangue; developed by two shafts ten and fourteen feet deep.

**Prince Imperial.**—300x1500 feet; situated on the north-west slope of Stony Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; owners W. A. Clark and E. McBride, both Ouray, and James E. Feeley, Chicago; vein a fissure eight feet wide, pay streak from twenty to twenty-four inches, containing galena, assaying from fifty to sixty ounces silver per ton, in a quartz gangue; developed by one forty-foot open cut and one twenty-five-foot tunnel.

**Providence.**—300x1500 feet; situated on the south slope of the Mt. Sneffles Range, seven miles south-west of Ouray; located in 1880; owners M. S. Corbett and W. S. Home, both Ouray; vein a fissure six feet wide, containing quartz carrying some brittle silver and gold, assaying $75 per ton; developments—three twenty-foot open cuts.

**Providence Mining Company (The).**—Incorporated under the laws of New York in November, 1881; capital stock $3,000,000, in 600,000 shares of $5 each, non-assessable; president, W. H. Wood, Providence, R. I.; manager, W. A. Clark, Ouray; office Providence and Ouray; owns the Belle of the West, 300x1500 feet; situated on the south-east end of Mt. Sneffles, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; vein a fissure four feet wide, pay streak fourteen inches, containing antimonial silver, assaying from 250 to 300 ounces silver per ton, in a quartz gangue; developed by one fifty-foot tunnel and one cross-cut 175 feet long.

**Quartzite Group.**—Four claims, 300x1500 feet each, numbered from one to four, adjoining the south limits of Ouray, Uncompahgre district; located in 1881 and 1882; owners Bell Bros., Ouray; vein a horizontal contact, eight feet thick, containing segregated pockets of copper and iron pyrites, galena, blue and green carbonates of copper, and oxide of manganese, assaying ninety ounces silver and $10 gold per ton; developed by three shafts from ten to twenty feet deep and three open cuts with ten-foot faces each. (Geo. W. Hall & Co.'s mill is situated on this property).

**Queen of Ouray.**—300x1500 feet; situated on the west side of the Uncompahgre River, four miles north of Ouray, Uncompahgre district; located in 1881; owners Wm. Story, W. J. Williams, and Andrew Wilson, all Ouray; vein a fissure, four feet wide, pay streak four inches, containing black sulphurets in a quartz gangue, milling, when sorted, $200 per ton; developed by one sixty-five-foot tunnel.

**Queen of the West.**—Owned by Daniel A., Alex., and Duncan McDonald, all Ouray; claim 300x1500 feet; situated on the south slope of Treasure Hill, eight miles south of Ouray, Mt. Sneffles district; located in 1877; vein a fissure, five feet wide, pay streak three feet, containing quartz, with galena and gray copper, milling, when sorted, eighty ounces silver per ton; developed by a thirty-foot drift and a thirty-foot tunnel.

**Queen of the West.**—300x1500 feet; situated on the north side of Bear Creek, five miles south-east of Ouray, Uncompahgre district; located in October, 1880; owner Joseph Papillon, Ouray; vein a fissure, forty inches wide, pay streak twenty-two inches, containing galena, with gray copper and brittle silver, assaying fifty ounces silver per ton, in a quartz gangue; developed by one tunnel thirty-five feet long.

**Raleigh.**—(Extension of Blue-grass); 300x1500 feet; situated in Virginius Basin, eight and one-half miles south-west of Ouray; Mt. Sneffles district; located in 1876; owners H. F. Blythe, L. W. Tevis, and others, all Ouray; vein a fissure, four feet wide, pay streak from three to eight inches, with an ore gangue and vein-matter similar to the Blue-grass; developments—one fifty-foot drift on the vein.

**Raven.**—(See Erie, Raven, and Gertie.)

**Rawley.**—300x1500 feet; situated on the north slope of Red Mountain, one-half mile north-east of Ironton, Red Mountain district; located in March, 1883; owned by M. A. and C. W. Blackmer and M. H. Gibbs, all Chicago, and G. M. Effinger, Montrose; ore body probably a deposit, a ten-foot shaft showing sulphurets on all sides and all the way down.

**Red Mountain No. 1.**—(Extension of Gray Copper Falls); 300x1500 feet; situated on the east slope of Red Mountain, seven and one-half miles north of Silverton, Red Mountain district; located in April, 1878; owners Ben. Harwood and Frank T. Rodd, both Silverton; vein a fissure, four feet wide, pay streak eighteen inches, containing gray copper in a quartz gangue, milling, when sorted, fifty ounces silver per ton; developed by a twenty-five-foot level.

**Red Mountain Park Placers.**—Seven claims, 160 acres each, viz.: Red Mountain, Park, Iron, Silver, Great Western, Virginia, and Eighty-three; situated on Red Mountain Creek, from three to seven miles south of Ouray, Uncompahgre district; the first four located in August, 1879, and the three last in 1883; owners the Ouray Mining and Discovery Company (see Lake County), J. A. Drummond, W. D. and W. F. Wheeler, V. B. Scheid, Talcott, Chas. F. Myers, and Abraham Cutler, all Ouray; developments—one and one-half miles of ditching; improvements—three cabins.

**Red Mountain Tunnel Site.**—3000x6 feet; situated on the west slope of Red Mountain, one-fourth mile north of Red Mountain Town, Red Mountain district; located in January, 1883; owners Geo. Lynch, D. F. Watson, and Michael O'Riley, all Rogerville; on which a tunnel is driven fifty feet long, designed to cut blind leads, and showing quartz carrying arsenical copper.

**Revenue Group.**—Five claims, 300x1500 feet each, viz.: Revenue, Security, Myrtle, Black Hawk, and Anglo-Saxon; situated on the north slope of Ruby Mountain, seven miles south-west of Ouray, Mt. Sneffles district; the first three located in 1877, and the two last in 1879 and 1880, respectively; owners H. E. Wright and M. D. Cooper, both Ouray; veins all fissures from three to seven feet wide, pay streaks from six to fifteen inches, containing galena and gray copper, with some ruby and native silver, in a quartz gangue, milling, when sorted, from 75 to 100 ounces silver per ton; developed by seven tunnels, 145, 65, 55, and the others from ten to thirty feet in length, one fifty-foot shaft, and eight open cuts with faces from ten to eighteen feet; output sixty tons.

**Richmond.**—(See Hoosier Girl and Richmond.)

**Richmond.**—300x1500 feet; situated on the east fork of Red Mountain Creek, eight miles from Ouray, Red Mountain district; located in October, 1882; owners Perry Terpenning, Red Mountain Town, and Buenemann Bros., Ouray; vein probably a fissure, about eight feet wide, a fifteen-foot open cut showing galena scattered through the vein-matter.

**Riqua.**—(See Madison and B. F. Riqua.)



**Riverside Tunnel and Mining Company (The).**—Incorporated under the laws of New York, in August, 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president and treasurer, James S. Davenport; vice-president, S. E. Church; secretary, James B. Davenport—all New York City; offices 24 Park Place, New York City, and at Ouray; owns ten claims, 300x1500 feet each, viz.: Riverside, E. E. Follett, Adelle, Cornwall, Henderson, New Jersey, Empire, Church, Fonda, Monelle, and Bosworth; situated on Red Mountain Creek, four and one-half miles south of Ouray, Uncompahgre district; located in 1877, and patented in 1879; veins all fissures from two to eight feet wide, pay streaks from eight to twenty-five inches, containing galena and iron and copper pyrites in a quartz gangue, milling, when sorted, twenty-five ounces silver per ton; developed by one cross-cut 232 feet long, 400 feet of drifting, one shaft 175 feet deep, and a thirty-foot level, with some other workings; and a five-acre mill site adjoining the lode claims, with a natural water-power of twenty-two feet fall; improvements—ore-houses, shaft-houses, boarding and bunk house, and tracks laid in tunnel.

**Robert Emmet and Fairplay.**—Two claims, 300x1500 feet each; situated on the south slope of Treasure Hill, eight miles south-west of Ouray, Mt. Sneffles district; located in May, 1880, and July, 1882, respectively, and the former in process of patent; owners Francis and John Carney and James M. Hinchie, all Ouray; veins both fissures seven feet wide each, pay streaks from twelve to eighteen inches, containing galena and gray copper, with ruby and brittle silver, in a quartz gangue, milling, when sorted, 110 ounces silver per ton; developed by one cross-cut fifty feet long and three open cuts from fifteen to twenty feet long.

**Robinson.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in 1882; owners O. P. Posey, J. W. Wingate, and Geo. Crawford, all Silverton, James Irvine, Lima, Ohio, James McKay and William Hammond, both Pittsburgh, Pa., and L. J. Atwood, Waterbury, Conn.; ore body probably a deposit, one tunnel forty feet long showing galena and lead carbonates on all sides for the last twenty feet, assaying forty per cent lead and forty-five ounces silver per ton.

**Robson.**—(See Newport (Ky.) Syndicate.)

**Rogers, Caledonia, and Friendly.**—Three claims, 300x1500 feet each; situated on the west slope of Red Mountain, at Red Mountain Town, Red Mountain district; the first located in June, 1880, and the last two in August, 1882; owners John Rogers, W. E. Earl, A. W. Hudson, and John S. Barger, all Silverton; ore body probably a deposit, a tunnel forty feet long showing mineral on all sides after the first thirty feet, and entering the ore body twenty feet below the surface, milling, when sorted, sixty per cent lead and forty ounces silver per ton, and a twenty-foot shaft showing arsenical copper similar in character to the Hudson ore; all on the Rogers claim, and on which there is also a tunnel 150 feet long, designed to cut the ore body 100 feet deep; a forty-foot cross cut develops the Friendly, and a twelve-foot-face open cut the work on the Caledonia.

**Roger Williams.**—300x1500 feet; situated on the north-west slope of Story Mountain, seven miles south-west of Ouray, Mt. Sneffles district; located in May, 1882; owners J. S. Blackwell Ames, Perry Davis, and Alex O. Tootle, and others, Providence, R. I.; vein a fissure five feet wide, pay streak from ten to twenty inches, containing galena and gray copper, assaying $50 per ton, in a quartz gangue; developments—one twenty-foot open cut with a ten-foot face.

**Rose Group.**—Five claims, 300x1500 feet each, viz.: Rose, Little Pigeon, Golden Gate, Goldfinch, and Big Pigeon; situated on the north-west slope of Hardin Mountain, one and one-half miles south-east of Ouray; the first located in 1877, the second in 1881, and the last three in 1882; owners Wm. Ripley, Harry Peyton, Peter P. Holtz, and Hubbell Talcott, all Ouray; veins all fissures from two to twenty-four feet, with continuous pay streaks from six to ten inches in width, containing manganese, oxides of manganese, and copper and iron pyrites, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developments—one tunnel 160 feet long on the Rose, and on each of the others a tunnel from ten to twenty feet in length, with some other workings.

**Roselle.**—300x1500 feet; situated on the east side of Cañon Creek, one and one-half miles south of Ouray, Uncompahgre district; located in August, 1882; owners C. W. and R. W. Haskins, both Ouray; vein a horizontal contact four feet thick, containing pockets of manganese and iron oxides; developed by one drift twenty feet long.

**Rough-and-Ready.**—300x1500 feet; situated on the west slope of Red Mountain, adjoining Red Mountain Town, Red Mountain district; located in January, 1883; owners C. R. Clark, F. H. Miner, W. E. Leslie, and Lois Johnson, all Red Mountain Town; ore body probably a deposit, one twelve-foot shaft showing galena and arsenical copper at the bottom.

**Royal Albert.**—(See Pitkin Group.)

**Ruby Trust Mining Company (The).**—Incorporated under the laws of New York in July, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Manuel Pomares; vice-president, J. W. Cushman; secretary and treasurer, J. P. Burrows; general manager, Geo. F. Burrows—all New York City; office 38 Broadway, New York City, and at Ouray; owns the Ruby Trust, 300x1500 feet; situated on Sneffles Creek, seven and one-half miles south-west of Ouray, Mount Sneffles district; located in 1877; vein a fissure, from one to five feet wide, pay streak from one to sixteen inches, containing galena and gray copper, with native silver in the form of wire, lead, ruby, and brittle silver, yielding, by sample assay, as high as $10 in gold and from 25 to 2,000 ounces silver per ton, in a quartz gangue, the vein-matter being soft porphyry with a clay gangue; developed by a cross-cut 150 feet long, two drifts 193 and 83 feet in length, connected by a seventy-three-foot shaft, and some other workings; output probably $5,000.

**Saginaw and Olathe.**—Two claims, 300x1500 feet each; situated at the head of Oak Creek, three miles west of Ouray, Mount Sneffles district; located in 1880, and in process of patent; owners G. B. and S. L. Wiggins, J. B. Hawry, and B. F. Webster, all East Saginaw, Mich.; vein a fissure, from four to ten feet wide, containing two pay streaks ten and twenty inches wide, composed of galena and gray copper with some native silver, assaying from 70 to 100 ounces silver per ton, in a quartz gangue; developed by one seventy-foot tunnel and one twenty-foot-face open cut.

**Sailor's Fortune.**—Situated on the east slope of Emma Mountain, and in Virginius Basin, eight miles south-west of Ouray, Mt. Sneffles district; located in 1876; owners Theron Stevens, J. R. Letcher, Henry Copp, and Peter Bloom, all Ouray; vein a fissure, five feet wide, pay streak from five to twenty inches, containing galena with brittle silver in a quartz gangue, milling, when sorted, from 100 to 150 ounces silver per ton; developed by one tunnel 150 feet long and one shaft forty feet deep.



**Savage.**—300x1500 feet; situated on the south side of Bear Creek, four and one-half miles south-east of Ouray, Uncompahgre district; located in 1880; owners J. D. Crain and M. H. Funk, both Ouray, and Richard Cox, Denver; vein a fissure, eight feet wide, pay streak from ten to fifteen inches, containing galena and gray and yellow copper with some brittle silver, assaying 150 ounces silver and $25 gold per ton, in a quartz gangue; developed by one twenty-foot-face open cut and one shaft twenty feet deep.

**Saxe.**—300x1500 feet; situated at the head of Red Mountain Creek, near Red Mountain Town, Red Mountain district; located in August, 1882; ore body probably a deposit, two open cuts, with ten-foot faces each, showing galena and star silver in the quartz, assaying twenty per cent lead and from fifteen to twenty ounces silver per ton.

**Scotch Girl and Irish Girl Group.**—Four claims, 300x1500 feet each, viz., Scotch Girl, Irish Girl, American Boy, and Alexandria; situated on west slope of Red Mountain, one and one-half miles north of Ironton, Red Mountain district; located in September, 1882; owned by Thos. Kennedy, Red Mountain Town, and James F. Stinebeck, Animas Forks; veins probably fissures, four, three, two and one-half, and ten feet wide, respectively, containing in the two first lodes lead and soft carbonates, assaying eighteen per cent copper, forty per cent lead, and twelve ounces silver per ton; in the two last the vein-matter is quartz, assaying a trace of gold and three ounces silver per ton; developments—one sixty-five-foot tunnel and one twenty-foot shaft on the Scotch Girl, an eighty-foot tunnel and thirty-foot cut on the Irish Girl, and a ten-foot-face cut on each of the others.

**Scotsman.**—300x1500 feet; situated on the east side of the Uncompahgre River, three miles north of Ouray, Uncompahgre district; located in January, 1881; owners Wm. Story and P. H. Anderson, both Ouray; vein a fissure, four feet wide, pay streak eight inches, containing galena and gray copper, assaying from 50 to 100 ounces silver per ton, in a quartz gangue; developed by sixty feet of tunneling.

**Security.**—(See Revenue Group.)

**Seven-Thirty.**—(See Mt. Sneffles Mining and Reduction Company.)

**Shakespeare Group.**—Four claims, 300x1500 feet each, viz., Shakespeare, Red Chief, Black Bess, and Snow-bird; situated on the west slope of Red Mountain, nine miles south of Ouray, Red Mountain district; located in November, 1882; owners Henry Blakesly and others, Ouray; ore body probably a deposit, three tunnels, fifteen feet long each, and one twenty-five-foot shaft, showing five feet of galena, iron and copper pyrites, assaying forty ounces silver per ton, in a quartz gangue.

**Shamrock.**—300x1500 feet; situated on the south fork of Mt. Sneffles Basin, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876, and in process of patent; owners Michael and Peter Dermody, both Silverton; vein a fissure four and one-half feet wide, pay streak twelve inches, containing galena, gray copper, with some brittle silver, in a quartz gangue, milling, when sorted, 300 ounces silver per ton; developed by an open cut, with a twenty-foot face, a tunnel from end of cut ten feet long, and a seventy-five-foot tunnel, designed to cut the vein seventy-five feet deep.

**Sidney.**—(See Emma Mountain Mining Company.)

**Silver Bell.**—300x1500 feet; situated on the west slope of Republican Mountain, five and one-half miles south of Ouray, Uncompahgre district;

located in 1879; owners Wm. Kilpatrick, Ouray, and F. Adams, Rico; vein a fissure four feet wide, streaked with galena and copper and iron pyrites, assaying from fifty to seventy-five ounces silver per ton; developed by an open cut twenty-five feet long, with a fifteen-foot face.

**Silver Cord.**—300x1500 feet; situated on the west side of the Uncompahgre River, four miles north of Ouray, Uncompahgre district; located in April, 1882; owners A. E. Baker, Ouray, L. M. Remine, Telluride, and Geo. A. Bute, Pueblo; vein a fissure fourteen feet wide, pay streak nine inches, containing galena and copper carbonates, assaying 100 ounces silver per ton, in a quartz gangue; developed by one seventeen-foot-face open cut.

**Silver Gem.**—(Extension of Queen of Ouray); 300x1500 feet; situated on the west side of the Uncompahgre River, four miles north of Ouray Uncompahgre district; located in 1881; owners A. E. Baker, V. B. Scheid, W. J. Williams, all Ouray, and Arthur McWilliams, Norfolk, Va.; vein a fissure four feet wide, pay streak four inches, containing black sulphurets in a quartz gangue, milling, when sorted, 200 ounces silver per ton; developed by one shaft 105 feet deep.

**Silver Gray and San Juan Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1878; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president and general manager, W. C. Roberts, Silverton; vice-president, S. E. Collyer, Denver; secretary, E. R. Dorothy, Durango; treasurer, Andrew Templeton, Denver; office 291½ Larimer street, Denver; owns two claims, 300x1500 feet each, viz.: Silver Gray, situated on the west slope of Brown Mountain, Uncompahgre district; located in July, 1876; vein a fissure four feet wide, pay streak two inches, containing gray copper and iron pyrites, assaying thirty ounces silver per ton, in a quartz gangue; developed by an open cut 100 feet long and twenty-five feet deep and one shaft ten feet deep; and Broad Gauge, situated on the north-east end of Red Mountain, Red Mountain district; located in August, 1876; vein a fissure forty feet wide, pay streak five feet, containing quartz carrying gray and yellow copper, iron pyrites, and some galena, assaying thirty ounces silver per ton; developed by an open cut with a ten-foot face and a tunnel from the end of cut twenty-five feet long.

**Silver Horn.**—300x1500 feet; situated on the south side of the Uncompahgre River, two miles south of Ouray, Uncompahgre district; located in 1880; owners Geo. R. Todd and Jas. A. Drummond, both Ouray; vein a fissure five feet wide, containing two pay streaks aggregating eighteen inches in width, composed of galena, zinc blende, iron, and copper, assaying from $20 to $60 per ton, in a quartz gangue; developed by an open cut and tunnel twenty feet long and one adit fifteen feet long.

**Silver King and Silver Flint.**—Two claims, 300x1500 feet each; situated on Cow Creek, eight miles east of Ouray, Uncompahgre district; located in April, 1882; owners W. E. Block, Ouray, Eugene Parsell, Flint, Mich., and others; vein a fissure twelve feet wide, pay streak twelve inches, containing galena, gray copper, and iron pyrites, assaying 100 ounces silver per ton, in a quartz gangue; developed by two shafts ten and fifteen feet deep.

**Silver Link Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $200,000, in 2,000 shares of $100 each, non-assessable; president, Wm. Thompson, Philadelphia; vice-president, Jno. H. Haines, Boston; secretary, A. S. Dodd; treasurer, W. H. Woolverton—both New York City; manager, Jno. Worthington, Ouray; offices 1,328 Broadway, New York, and Ouray, Colo.; owns seven claims, 300x1500 feet each, viz.: Climax, Silver Link, and Great Epoch, three adjoining claims on



the same vein, and Rob Roy, Ivanhoe, Bryn Mawr, and Cader Idris; situated on the west slope of Mts. Kline and Buena Vista, three and one-half miles from Ouray, Uncompahgre district; the first three claims located in 1875, and patented in 1882, as well as a mill site of five acres adjoining, and the others in 1880; veins all fissures, the Silver Link twenty feet wide at the outcrop, and the others from two to ten feet, with pay streaks from one to five feet, containing gray copper in a quartz gangue, milling, when sorted, an average of twenty per cent copper and 135 ounces silver per ton, although U. S. Mint assays have shown much more; developments—three tunnels on the veins, fifty feet long each, and one cross-cut, designed to cut the main vein at a depth of from 1,500 to 2,000 feet, now in 700 feet, and having about 700 feet more to run; the work on the same being done by two steam drills, motive power supplied by one twenty-one-horse-power boiler and one six-horse-power engine, with a forty-five-inch blower.

**Silver Point.**—(See Buena Vista Mountain Mining Company.)

**Silver Queen.**—300x1500 feet; situated on the east side of Bear Creek, three and one-half miles south-east of Ouray, Uncompahgre district; located in July, 1880; owners Joseph Van Doren and W. F. Fourrell, both Ouray; vein a fissure, from three to ten feet wide, pay streak ten inches, containing galena and gray copper, assaying from ten to twenty per cent copper and from 75 to 150 ounces silver per ton, in a quartz gangue; developed by one twelve-foot open cut and one twenty-foot tunnel.

**Silver Star.**—(On the Silver Link vein); 300x1500 feet; situated on the west slope of Mt. Kline, three and one-half miles north-east of Ouray, Uncompahgre district; located in July, 1876; owners Geo. P. Costigan and Wm. Story, both Ouray, and Geo. W. Crummey, Pueblo; vein a fissure, fourteen feet wide, pay streak from ten to thirty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, seventy-five ounces silver per ton; developed by one eighteen-foot shaft and one thirty-foot tunnel.

**Silver Wave.**—(On Silver Point vein); 300x1500 feet; situated on the west slope of Engineer Mountain, three and one-half miles south-east of Ouray, Uncompahgre district; located in August, 1882; owners Bell Bros., Ouray, and H. C. Howard, Indiana Town, Pa.; vein a fissure, three feet wide, pay streak twenty inches, containing iron and copper pyrites with some brittle silver, assaying seventy-five ounces silver per ton, in a quartz gangue; developed by one twelve-foot open cut and one ten-foot tunnel.

**Sivyer.**—300x1500 feet; situated on the south side of Bear Creek, three and one-half miles south-east of Ouray, Uncompahgre district; located in 1876; owner Alfred L. Sivyer, Ouray; vein a fissure, three feet wide, pay streak fourteen inches, containing principally iron and copper pyrites, associated with some galena, in a light, white quartz gangue, milling, when sorted, from 50 to 150 ounces silver per ton, and sometimes considerable gold; developed by one sixty-foot shaft and one cross-cut 125 feet long; output sixty tons.

**Slippery Rock.**—300x1500 feet; situated on the west slope of Buena Vista Mountain, three miles from Ouray, Uncompahgre district; located in 1882; owners Jno. Worthington and Peter Falck, both Ouray, and Edward Worthington, Brady's Bend, Pa.; vein a fissure, three feet wide, containing galena, assaying $100 per ton, in a quartz gangue; developed by one drift fifty feet long.

**Smuggler Mining Company.**—(Unincorporated); composed of Alling & Co., J. T. Wallace, and Wm. Schultz, all Ouray; owns three patented claims, viz., the Smuggler, Little Annie, and White Cloud, 300x1500

feet each; situated on the west slope of Red Mountain, adjoining the Guston and Robinson properties, about one and one-half miles south of Ironton, Red Mountain district; ore bodies probably deposits, 100 feet of shafting on the Smuggler showing a body of steel galena, with a copper ore similar to that in the Guston, and carrying gold, assaying from 150 to 300 ounces silver and from one to three ounces gold per ton, one seventy-five-foot tunnel on the Little Annie showing a copper ore body about five feet wide, and assaying well in gold, silver, and copper; and $900 worth of developments on the White Cloud, showing a copper ore similar to that on the other two claims.

**Snow-flake and Snow-bird.**—Two claims, 250x1500 feet each; situated on the south-east slope of Treasure Hill, nine miles south-west of Ouray, Mt. Sneffles district; located in 1876 and 1878, respectively; owners Christopher Cogan, Ouray, and Thos. C. Stevens, Trinidad; veins both fissures, from four to six feet wide, pay streaks from twenty to thirty inches, containing galena, with some brittle and ruby silver, in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developments—two open cuts and one tunnel 100 feet long on the former and one fifty-foot tunnel and one cross-cut fifty-five feet long on the latter.

**Snow-foot.**—300x1500 feet; situated on the west slope of Red Mountain, one mile from Red Mountain Town, Red Mountain district; located in February, 1883; owners M. E. Hopkins, Chattanooga, and R. H. Rose, Red Mountain Town; ore body probably a deposit, a twelve-foot-face open cut showing some galena and gray copper in the quartz.

**Solid Muldoon.**—(See Banner Group.)

**Solid Muldoon.**—300x1500 feet; situated on the north side of Cañon Creek, and at the mouth of Imogene Basin, six miles south-west of Ouray, Mt. Sneffles district; located in October, 1881; owners James M. Mackoy, Nelson J. Downer, and Fred. J. Wells, all Ouray; vein a fissure forty inches wide, pay streak fourteen inches, containing galena and gray copper, assaying thirty-six ounces silver per ton, in a quartz gangue; developed by one tunnel sixty-five feet long and one cross-cut fifteen feet long.

**South Star.**—300x1500 feet; situated on the east slope of Old Stony Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in July, 1882; owner J. T. Wallace, Ouray; vein a fissure from ten to thirty inches wide, pay streak from four to fourteen inches, containing steel galena, with ruby and brittle silver, assaying fifty ounces silver per ton, in a quartz gangue; developed by one fifteen-foot open cut and one eighteen-foot tunnel.

**Spanish Bar.**—Owners F. C. Thornton, Thos. Brady, and J. L. Haines, all Red Mountain City; located in March, 1883; claim 300x1500 feet; situated on the west slope of Red Mountain, Red Mountain district; vein probably a fissure, seven feet wide, pay streak eighteen inches, containing fine-grained galena in a quartz gangue; developed by two open cuts with ten-foot faces each.

**Spanish Dollar and Legal Tender.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on Bear Creek, four and one-half miles south-east of Ouray, Uncompahgre district; located in 1878; the former owned by Miner Bros., Lake City, and the latter by Thos. A. Shaw and S. S. Sharpe, both Wyandott, Kas., and Harry Youmans, Lake City; vein a fissure sixteen feet wide at the outcrop, with two pay streaks, one on the foot-wall sixteen inches wide, containing gray copper, with some brittle silver, in a quartz gangue, one mill-run of sorted ore showing 119 ounces silver per ton,



and one on the hanging-wall sixteen inches wide of white quartz carrying rich pockets of ruby and brittle silver and some gold; developed by one cross-cut 102 feet long on the last and assessment work on the first.

**Spectator.**—(See Champion and Spectator.)

**St. Julian.**—300x1500 feet; situated on the west slope of Red Mountain, one mile south-west of Red Mountain Town, Red Mountain district; located in November, 1882; owners E. H. Stanton, Red Mountain Town, and J. D. Rollins, Silverton; ore body probably a deposit, one ten-foot-face cut showing gray copper in the quartz on all sides.

**St. Louis.**—300x1500 feet; situated on the north-east slope of Emma Mountain, nine miles south-west of Ouray, Mt. Sneffles district; located in May, 1880; owners Jno. Godin and Jno. Svenson, both Ouray; vein a fissure forty inches wide, pay streak from six to eight inches, containing galena and gray copper in a gangue, milling, when sorted, seventy-five ounces silver per ton; developed by two tunnels thirty and twelve feet long, respectively, and one forty-foot open cut.

**Star of the West.**—300x1500 feet; situated on the east slope of Treasure Hill, nine miles south-west of Ouray, Mt. Sneffles district; located in June, 1876; owners Patrick Stanley, Michael Dermody, and A. W. Hudson, all Silverton; vein a fissure five feet wide, pay streak twelve inches, containing galena, with some brittle silver, assaying from fifty to seventy-five ounces silver per ton, in a quartz gangue; developed by a thirty-five-foot drift.

**Stars and Stripes Group.**—Three claims, 300x1500 feet each, viz., Stars and Stripes, Great Republican, and Golden Rule; situated on the north-west side of Diamond Creek, five miles south-east of Ouray, Uncompahgre district; located in July and August, 1882; owner W. J. Buchanan, Ouray; vein a fissure six feet wide, pay streak eighteen inches, containing galena, gray copper, and copper glance, assaying from 75 to 100 ounces silver per ton, in a quartz gangue; developed by three open cuts from fifteen to thirty feet in length.

**Stoddard.**—300x1500 feet; situated on the south side of Bear Creek, two and one-half miles south-east of Ouray, Uncompahgre district; located in January, 1881; owners W. E. Redding and others, New York City; vein a fissure forty inches wide, pay streak sixteen inches, containing galena, with some antimonial silver and quartz carrying gold, milling, when sorted, $100 per ton; developed by one twenty-foot shaft and one seventeen-foot incline; output ten tons.

**Stonewall Jackson.**—300x1500 feet; situated on Sneffles Creek, six and one-half miles south-west of Ouray, Mount Sneffles district; owner A. W. Richardson, Ouray; vein a fissure three feet wide, with the same gangue as the Wheel of Fortune, the ore being brittle silver, copper and iron pyrites, and some blende and manganese spar associated with the metals, native or wire silver being frequently found where the iron pyrites joins the quartz gangue, sample assays on six inches of which showing from 50 to 150 ounces silver per ton and some gold; developments—one twenty-five-foot shaft in ore.

**Ten Broeck.**—300x1500 feet; situated on the west slope of Brown Mountain, Uncompahgre district; located in July, 1879; owners Geo. Hemphill and others, Silverton; vein a fissure twelve feet wide, pay streak forty inches, containing gray and yellow copper, with some antimonial silver, in a

quartz gangue, milling, when sorted, 118 ounces silver per ton, and some of the ore as high as twenty-two per cent copper; developed by a forty-five-foot level.

**Terrible.**—300x1500 feet; situated in Virginius Basin, eight and one-half miles south-west of Ouray, Mount Sneffles district; located in 1875; owners A. E. Reynolds, H. F. Smith, and M. E. Downs, all Lake City; vein a fissure, from four to six feet wide, with trachyte walls, a soft porphyry-vein filling, and a clay gouge, pay streak from four to twenty inches, containing galena and gray copper, with ruby and native silver, the latter in the form of wire, apparently plastered onto the galena, in a quartz gangue, milling, when sorted, from 25 to 150 ounces silver per ton; developed by 900 feet of drifts and one fifty-foot shaft; output 400 tons.

**Texas.**—300x1500 feet; situated on the south side of the Uncompahgre River, five miles south-east of Ouray, Red Mountain district; located in 1874; owned by E. W. Hunt, W. J. Forsyth, and Albert Bernard, all Howardsville; vein a fissure four feet wide, pay streak twenty-four inches, containing galena and iron pyrites, assaying forty per cent lead and sixty ounces silver per ton, in a quartz gangue; developments—one seventy-foot tunnel on the vein.

**Three Bill.**—300x1500 feet; situated on the divide between Red Mountain and Mineral Creeks, three-fourths mile south-west of Red Mountain Town, Red Mountain district; located in October, 1882; owners S. S. Watson, Wm. Alley, and Wm. McFarland, all Red Mountain Town; vein probably a fissure, seven feet wide, pay streak twenty-four inches, containing copper and iron pyrites and some galena in a quartz gangue; developed by one twenty-foot shaft.

**3 J. Group.**—Four claims, 300x1500 feet each; situated on the west side of Red Mountain Creek, eight miles north-west of Silverton, Red Mountain district; located in March, 1883; veins all fissures, in the 3 J. five feet wide, in the Snow-storm four feet wide, in the Tom Paine four feet wide, and in the Oakland three and one-half feet wide, containing talc carrying galena, which assays from $25 to $30 per ton; developments—one fifty-foot shaft and three open cuts, with fifteen-foot faces each; owners Frank W. Ingersoll, J. J. Wade, John McKenzie, and J. H. Alderson, all Silverton.

**Tidal Wave.**—(Extension of Silver Link); 300x1500 feet; situated on the north slope of Buena Vista Mountain, three and one-half miles north of Ouray, Uncompahgre district; located in 1877; owners Jno. Worthington and F. C. Meyer, both Ouray, and Edward Worthington, Brady's Bend, Pa.; vein a fissure, twenty feet wide, pay streak five feet, containing gray copper in a quartz gangue, milling, when sorted, $50 per ton; developed by a drift fifty feet long.

**Tom Culbert and Gracie May.**—Two parallel claims, 300x1500 feet each; situated on the north-west side of Diamond Creek, five miles south-east of Ouray, Uncompahgre district; located in May, 1881; owners A. C. Yost, Frank Englehart, Jno. Denny, W. J. Buchanan, all Ouray, and others; veins both fissures, ten and five feet wide, respectively, with pay streaks eighteen and nine inches, containing galena and gray and yellow copper, assaying from 75 to 100 ounces silver per ton, in a quartz gangue; developed by one cross-cut 107 feet long and an open cut and tunnel thirty feet long.

**Tornado.**—(See Bank of San Juan and Tornado.)



**Traverse.**—300x1500 feet; situated at Ouray, Uncompahgre district; located in April, 1877; owner J. D. Crain, Ouray; vein a fissure forty inches wide, containing galena in a decomposed gangue, assaying sixteen ounces silver per ton; developed by one fifty-foot tunnel.

**Treasure Hill and Onganyon.**—Two claims, 300x1500 feet each; situated on the crest of Treasure Hill, eight miles south-west of Ouray, Mount Sneffles district; located in 1876, and in process of patent; owner Jno. McBride, Trinidad; veins both fissures from four to eight feet wide, pay streaks from twenty to forty inches, containing galena with some ruby and brittle silver, assaying thirty per cent lead and from 75 to 100 ounces silver per ton, in a quartz gangue; developed by one cross-cut 100 feet long, one shaft twelve feet deep, and one open cut twenty feet long.

**Treasure Trove.**—300x1500 feet; situated on the west slope of Red Mountain, adjoining Red Mountain Town; owners C. R. Clark, F. H. Miner, and Chas. Fleck, all Red Mountain Town, and T. Van Timmons, Silverton ore body probably a deposit, one fifteen-foot shaft showing galena all across the bottom.

**Tribune.**—(See Danebroge and Tribune.)

**Trout and Fisherman Group.**—Five claims, 300x1500 feet each, viz.: Trout, Fisherman, Gray Copper, and two others; situated on the Uncompahgre River and Cañon Creek, probably within the south limits of Ouray, Uncompahgre district; located in 1876, and patented in 1881; owners E. W. McIntyre and Eugene Parsell, both Flint, Mich., G. B. Wiggins, J. W. Hawry, and S. L. Webster, all East Saginaw, Mich.; veins all fissures from six to thirty inches wide, with altered-sandstone walls, containing gray copper and iron and copper pyrites, a little galena, and the blue and green carbonates of copper, in a quartz porphyry matrix, milling, when sorted, 150 ounces silver per ton, specimen assays on the gray copper showing as high as 1,500 ounces; developed by five shafts from ten to fifty feet in depth, fifty feet of open cuts, and thirty square feet of stoping; output probably $15,000.

**Tuesday.**—(See Monday, Tuesday, and Bully Boy.)

**Tuscola.**—(See Hancock and Tuscola.)

**U. S. Depository.**—300x1500 feet; situated on the north-east slope of Buckeye Mountain, seven miles south-west of Ouray, Mt. Sneffles district; located in September, 1875; owner H. E. Wright, Ouray; vein a fissure, ten feet wide, pay streak from ten to twenty-five inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty ounces silver per ton; developed by one tunnel 200 feet long; output fifty tons.

**Una Group.**—Five claims, 300x1500 feet each, viz., Una, Palo Alto, Massasoit, Cincinnati, and King Philip; situated in Imogene Basin, eight and one-half miles south-west of Ouray, Mt. Sneffles district; located in 1880 and 1881, and patented in 1883; the Una Mill site, five acres, adjoining the lode claims and covered with excellent timber; owners Reed Bros., Ouray; veins all fissures, from five to eighteen feet wide, pay streaks from thirty to fifty inches, containing galena, copper pyrites, and bismuth in a quartz gangue, milling, when sorted, from fifteen to forty ounces silver per ton, and in the Una some gold; developments—one tunnel 265 feet long on the Una and one discovery shaft twelve feet deep on each of the others.

**Uncle Sam.**—300x1500 feet; situated on the west slope of Engineer Mountain, at the head of Bear Creek, three and one-half miles west of Rose's Cabin, Uncompahgre district; located in 1882; owners H. L. Franklin, James

E. Sheets, and W. T. Deen, all Lake City; ore body probably a deposit, a forty-three-foot shaft showing copper sulphates in a porphyry gangue, from the bottom upwards for six feet, and a twenty-one-foot drift, starting from shaft at depth of twenty-six feet, showing mineral of the same quality in the breast, top, and bottom, milling from twenty-eight to thirty per cent copper and 100 ounces silver per ton.

**Union.**—(See Ouray Union Mining Company.)

**Union Trust.**—300x1500 feet; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in September, 1882; owners F. G. Burnett, J. R. Penoier, and Henry G. Burt, all Ouray; vein probably a fissure, at least six feet wide, showing galena and oxides of copper and iron, in a quartz gangue; developed by two shafts twenty-three and twenty-five feet deep, one cross-cut 105 feet long, and an open cut fifteen feet long.

**Ute Coal Company.**—(Unincorporated); president, M. S. Corbett; secretary, W. A. Sherman—both Ouray; owns ten claims, 160 acres each; situated ten miles east of Los Pinos Agency; containing three horizontal strata of lignite and bituminous coal, a superior quality, from two to twenty feet in thickness, and supposed to underlie the entire ground.

**Veta.**—(See Confidence and Veta.)

**Virginia.**—300x1500 feet; situated on the west slope of Red Mountain, three-fourths mile north of Red Mountain Town, Red Mountain district; located in January, 1883; owners Chas. G. Carlstram, Animas Forks, Wm. Alley, Red Mountain Town, Henry Miller and T. J. Andrews, both Eureka; ore body probably a deposit, one shaft thirty feet deep showing copper pyrites in a quartz gangue across the entire bottom.

**Virginia.**—300x1500 feet; situated on the north side of Bear Creek, three miles south-east of Ouray, Uncompahgre district; located in June, 1879; owner Mrs. Joseph Van Doren, Ouray; vein a fissure, four feet wide, pay streak eighteen inches, containing galena and gray copper, assaying from twenty-five to seventy-five ounces silver per ton, in a quartz gangue; developed by one open cut and shaft twelve feet deep and tunnel fifteen feet long.

**Virginia Gulch Group.**—Five claims, 300x1500 feet each; situated on the south slope of Engineer Mountain, three-fourths mile north of Mineral Point, Uncompahgre district; owner W. T. Roney, Mineral Point; veins all fissures, as follows: In the Virginia six feet wide, containing gold and silver quartz, carrying some galena, gray copper, and brittle silver, and assaying $100 per ton; developed by a seventeen-foot shaft and a twenty-foot drift; located in June, 1875; in the Little Lily four feet wide, containing gold and silver bearing quartz, assaying $100 per ton; developed by one sixty-foot tunnel; located in August, 1877; in the Wild Cat four feet wide, pay streak eighteen inches, containing galena and gray copper, assaying 150 ounces silver per ton, in a quartz gangue; developed by one twenty-two-foot tunnel; located in August, 1875; in the Dexter five feet wide, pay streak twenty inches, containing galena and gray copper, assaying 150 ounces silver per ton, in a quartz gangue; developed by one thirty-foot-face cut, with an eight-foot shaft from the end of cut; located in August, 1878; and in the Congress four and one-half feet wide, pay streak eighteen inches, containing galena and gray copper, assaying 100 ounces silver per ton, in a quartz gangue; developed by one thirteen-foot-face cut and one eight-foot shaft from end of cut; located in July, 1878 (John Croft and E. B. McAbee, both Pittsburgh, Pa., are owners of the last two claims).



**Virginius.**—(See Caroline Mining Company.)

**Vulcan Gold and Silver Mining Company (The).**—Incorporated in 1879; capital stock $150,000; trustees, Hon. Lewis Jones, Egbert Guernsey, M. D., and Meredith L. Jones; president, Hon. Lewis Jones; secretary and treasurer, Meredith L. Jones—both New York City; office 120 Broadway, New York, and also at Ouray; owns the Vulcan lode, 300x1500 feet; situated on the south slope of Potosi Mountain, six and one-half miles south-west of Ouray, Mt. Sneffles district, and patented in 1879; vein a fissure from eight to twelve feet wide, pay streak twelve inches, containing galena with some brittle and ruby silver in a quartz gangue, milling, when sorted, an average of fifty ounces silver per ton; developed by one tunnel 100 feet long on the vein and one fifteen-foot cross-cut.

**Wheel-of-Fortune Consolidated Mining Company (The).**—Incorporated under the laws of New York; capital stock $3,000,000, in 600,000 shares of $5 each, non-assessable; officers—ex-Gov. Henry M. Hoyt, Harrisburgh, Pa., president; Hon. Aaron H. Cragin, New York City, vice-president and treasurer; Harrison Wright, Wilkes Barre, Pa., secretary; J. Ridgeway Wright, New York City, assistant secretary; trustees, ex-Gov. Henry M. Hoyt, Harrisburgh, Pa., Hon. Aaron H. Cragin, Walter G. Hennesy, W. M. Symmington, C. L. Williston, and A. G. Hoyt, all New York City; Hon. Lewis Pughe, Scranton, Pa., G. W. Miller and Wm. P. Ryman, both Wilkes Barre, Pa.; registrar, the Farmers' Loan and Trust Company, New York; office Room 35 No. 63 Broadway, New York, Wilkes Barre, Pa., and Ouray, Colo.; owns the Wheel-of-Fortune group of mines and a five-acre mill site, the principal of which are held by U. S. patents; situated on Ruby Mountain, between Imogene and Sneffles Basins, about seven miles from Ouray, Mt. Sneffles district; consisting of eight claims, viz.: Wheel-of-Fortune and Monetizer, two adjoining claims on the same vein, traceable for miles along the outcrop, B. J. Smith, Silver Queen, and Grand Trunk (crossing the Wheel-of-Fortune vein), Mark Twain (an extension of the Grand Trunk), and the Wild Cat and Bell; Mark Twain is 1000x300 feet and the others 1500x300 feet; veins all fissures, in the Wheel-of-Fortune about six feet wide, in a felspathic porphyry formation, having soft porphyry for vein-matter, and very light, white quartz as the gangue of the ore, the character of the latter being galena and brittle silver, occasionally ruby silver and gray copper, with blue and green carbonates of copper, iron pyrites and zinc blende, assaying from one-fourth to one and three-fourths ounces gold (probably averaging three-tenths of an ounce) and from 100 to 400 ounces silver (probably averaging 140 ounces) per ton; the developments consisting of five different drifts, with cross-cuts and winzes, and considerable stoping, aggregating about 1,000 feet of work on the vein; and of the other claims the most prominent is the Mark Twain (the rest having little development other than assessment work), its mineral vein, or pay streak, being about ten inches wide, and containing galena and gray copper in a quartz gangue, on which some high assays have been obtained; all the veins crossing the Wheel-of-Fortune will be developed at great depth by simply driving ahead on the Wheel-of-Fortune vein.

**White Cloud.**—(See Smuggler Mining Company.)

**White Whale.**—300x1500 feet; situated on the east side of Diamond Creek, four and one-half miles south-east of Ouray, Uncompahgre district; located in May, 1882; owner S. H. Woodcock, Ouray; vein a fissure three feet wide, pay streak from twelve to twenty inches, containing galena, with some brittle silver, assaying fifty ounces silver per ton, in a quartz gangue; developed by one ten-foot shaft and one ten-foot open cut.

**William Penn.**—300x1500 feet; situated on the north-west slope of Hardin Mountain, eight miles south of Ouray, Red Mountain district;

located in September, 1882; owners Wm. J. Hasley and John A. Barckley, both Ouray; vein a fissure six feet wide, pay streak from twenty to fifty inches, containing galena and arsenical copper in a quartz gangue; developed by an open cut twenty feet long.

**Williams, Roger.**—300x1500 feet; situated on the north-west slope of Stony Mountain, seven miles south-west of Ouray, Mount Sneffles district; located in May, 1882; owners J. S. Blackwell, Ames, and Perry Davis, Alexander O'Toole, and others, Providence, R. I.; vein a fissure five feet wide, pay streak from ten to twenty inches, containing galena and gray copper, assaying $50 per ton, in a quartz gangue; developments—one twenty-foot open cut with a ten-foot face.

**Windham Silver Mining and Smelting Company (The).**—Incorporated in April, 1878; capital stock $50,000, in 500 shares of $100 each, non-assessable; owns a smelting-works; situated on the Uncompahgre River, three miles from Ouray, containing a complete plant of smelting machinery, motive power supplied by water; capacity ten tons per day (twenty-four hours), but they have been idle for some time.

**Woodcock.**—300x1500 feet; situated at the mouth of Poughkeepsie Gulch, six miles south-east of Ouray, Uncompahgre district; located in June, 1876; owners S. H. Woodcock, Ouray, and M. L. Robinson, Winfield, Kas.; vein a fissure three feet wide, containing galena, iron and copper pyrites, which assays twenty-one ounces silver per ton, in a quartz gangue; developed by one shaft 100 feet deep.

**Yankee Boy.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile north of Red Mountain Town, Red Mountain district; located in 1883; owners S. T. Stanton, Frank W. Ingersoll, and Thomas Cain, all Silverton, Pat Cain, Rico, and David Swickhamer, Red Mountain City; vein probably a fissure, fifteen feet wide, containing four feet of arsenical copper and galena in a quartz gangue, assaying $90 per ton; developed by one ten-foot-face cut.

**Yankee Boy.**—Owners S. Goode and Henry Ewbanks, both Red Mountain Town; claim 1500x300 feet; situated on the west side of Red Mountain Creek, one and one-half miles south-west of Ironton, Red Mountain district; located in March, 1883; ore body probably a deposit, an open cut with a ten-foot face showing a streak of gangue, carrying galena and arsenical copper in boulders and pockets, assaying sometimes as high as 189 ounces silver per ton.

**Yankee Boy Group.**—Four claims, 300x1500 feet each, viz.: Yankee Boy, Dutch Boy, two adjoining claims on the same vein, York State and Genesee, also adjoining claims on the same vein; situated on Ruby Creek, eight miles south-west of Ouray, Mt. Sneffles district; located in 1875, and the first in process of patent; owners Emile Charest, Michael Dermody, and R. B. Town, all Ouray; veins both fissures, from four to six feet wide, pay streaks from eighteen to twenty-five inches, containing ruby and brittle silver, associated with a small percentage of steel galena, and somewhat of red blende, the gangue being white quartz and baryta, milling, when sorted, probably an average of 200 ounces silver per ton, but some of the ore shipped is said to have run as high as 1,200 ounces silver per ton; developments—two cross-cuts 45 and 260 feet long, one forty-foot shaft, two levels 300 and 375 feet long, respectively, both on the same vein, from which, as near as can be now estimated, ore to the value of $100,000 has been obtained without any stoping.



**Yankee Chicken.**—Owners Jno. Carroll and R. S. Street, both Ironton, and Chester Greenwood, Telluride; claim 300x1500 feet; situated on Gray Copper Falls Creek, one-half mile north-east of Ironton, Red Mountain district; located in February, 1883; vein probably a fissure, twelve feet wide, pay streak twenty-four inches, containing decomposed galena; developments—ten-foot-face cut.

**Yankee Girl Mining Company (The).**—Incorporated under the laws of Pennsylvania, early in 1883; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, James McKay, Pittsburgh; vice-president, L. J. Atwood, Waterbury, Conn.; secretary and treasurer, W. J. Hammond; general manager, Geo. Crawford—both Pittsburgh; offices Pittsburgh and Silverton; owns the Yankee Girl and Orphan Boy, two claims, 300x1500 feet each; situated on the west slope of Red Mountain, one and one-half miles north of Red Mountain Town, Red Mountain district; located in August, 1882, and the former in process of patent; ore bodies are deposits, two shafts on the Yankee Girl seventy and eighty feet deep, the former showing rich bunches of copper ore and the latter galena on all sides, and also a tunnel 100 feet long cutting the bottom of both shafts; output 1,200 tons, which milled an average of fifty per cent lead and seventy ounces silver per ton, but the mineral obtained from the present workings contains sometimes as high as 160 ounces silver per ton; this is one of the largest ore bodies discovered in the San Juan country, and is so easily mined that two men did for months take out ten tons per day; on the Orphan Boy there is a thirty-foot shaft showing galena and arsenical copper on all sides, assaying forty per cent lead and fifty ounces silver per ton.

**Yellow Gal.**—Owners Ed. Brinckman and C. M. Robinson, both Red Mountain Town, and August Riche, Leadville; claim 300x1500 feet; situated in Silver Basin, one-half mine north-west of Red Mountain Town, Red Mountain district; located in March, 1883; vein a fissure, three feet wide, containing gold and silver bearing quartz; developed by a twenty-five-foot tunnel.

**Yellow Rose.**—300x1500 feet; situated at the foot of Imogene Basin, seven miles south-west of Ouray, Mt. Sneffles district, and patented; vein a fissure, traceable on the surface for over three miles (ten claims are located on this vein), and from four to eight feet wide, the ores having galena as their base and including gray copper, silver glance, native silver in leaf and wire, red and resin blende, iron and copper pyrites, and the blue and green carbonates of copper, with large quantities of mangenese silicates and carbonate of manganese, the latter generally accompanied by both native silver and silver glance appearing on the hanging-wall, with a white quartz as the matrix of the metals, and a clay gouge between the mineral and the wall, the space between the ore and the foot-wall containing soft gray porphyry, the pay streak varying from ten to thirty-six inches in width, assaying from 20 to 130 ounces silver per ton, the present workings, however, showing mineral of a much better quality; developments—one drift on the vein 480 feet long.

**Yellowstone.**—300x1500 feet; situated on the west slope of Potosi, Mountain, eight miles south-west of Ouray, Mt. Sneffles district; located in 1877, and patented in 1883; owners Theron Stevens, Ouray, Rodney and ——— Curtis, Mrs. Frances Goss, and estate of C. J. Goss, all Denver; vein a fissure eight feet wide, pay streak nine inches, containing brittle silver and quartz carrying free gold, assaying from $250 to $500 in gold and silver per ton; developed by one tunnel thirty feet long and three cross-cuts, twenty, sixteen, and eight feet long, respectively.

**York State.**—(See Yankee Boy Group.)

# Park County.

This County is situated in the geographical and metal-producing center of the State; and is bounded on the north by Summit and Clear Creek, on the east by Jefferson and El Paso, on the south by Fremont and Chaffee, and on the west by Chaffee, Lake, and Summit Counties. It has an estimated population of 5,000 (with Fairplay as its county seat, although there are a number of other towns, the most prominent of which is Alma), and covers an area of 2,222 square miles, within which are several peaks rising to the height of more than 14,000 feet.

The geological features are peculiar, embracing all the formations from the archæan to the quaternary and recent, and so intermingled—changing radically within short distances—that the region is both a curious and interesting study to the scientist and an inextricable puzzle to the prospector and miner. Touching this question, Prof. J. Alden Smith says: "Scarcely two of the districts present the same or even similar geological features. In Montgomery, Buckskin, Mosquito, and Pennsylvania divisions the formations bear close resemblance to each other, the veins being fissures, contacts, and bedded. The upper contact lies between porphyry and limestone. Lower down, we find contacts between lime and quartzite, porphyry and quartzite, and between quartzite and granite, or gneiss. The bedded veins lie both in the limestone and quartzite. The fissures originate in the granitic rocks, and break up through the quartzites and the limestone to the contact with the porphyry, in some rare instances through the porphyry to the surface. In the fissures of the archæan rocks, and at the contact with the quartzite, the ore is mainly composed of the sulphides of iron, zinc, copper, and lead, the precious metal being largely gold. Above the quartzite the lead is more abundant, with less of the other base metals, the precious contents being almost exclusively silver."

On Mounts Lincoln and Bross, especially near the top, the veins are generally contacts, some of the mines being very productive; and in the Buckskin district they are both fissures and contacts, carrying gold and silver, with nearly all the baser metals, the ores being as a rule fair grade, including all the mixtures necessary for economical and successful matte-smelting, and in some of the properties are large bodies of free-milling material. In the Mosquito district both fissures and contacts are found (some of which have in the past been quite productive), the gold and silver occurring in about equal proportions, and the product being both smelting and free-milling. The veins in the Pennsylvania, Sacramento, and Horseshoe districts are mostly contacts between limestone and porphyry, the ores in the first two of which are medium in grade, while in the last they are noted for being low-grade in silver and rich in lead. Montgomery district, though settled in 1860, was practically abandoned until about four years since (when a revival took place), owing to the absence of means for treating the refractory minerals. It contains excellent ores in abundance, as shown by late explorations, and with the introduction of



suitable reduction-works, will again take a front rank. In the Hall Valley district the veins are strong and well defined fissures in a granite formation, and the ores perhaps above the average grade.

The placers of Park County have been worked continuously since 1860, and will doubtless last for many years to come; although they have not received the attention which their merits deserve. Those already developed are worked in a small way and with little regard to system or economy; but with the vigorous application of modern devices would yield pounds instead of ounces of gold per day.

**Abington Mining and Milling Company (The).**—Incorporated under the laws of Colorado, November 16, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and manager, Platt McDonald, Chicago; vice-president, M. M. Towne, Harvard, Ill.; treasurer, Chas. A. Knight; secretary, H. V. Reed—both Chicago; offices Room 19 *Times* Building, Chicago, and at Alma; owns Abington No. 1, Eagle Bird, Robert E. Lee, Carbonate, and Christian Aid, 300x1500 feet each, and Abington No. 2, 150x1500 feet; situated on the crest of Buckskin Mountain, six miles from Alma, Buckskin Joe district; located in 1878; veins horizontal contacts, with porphyry and lime walls from three to four feet thick, containing lime, porphyry, and quartz, the latter gold-bearing, milling sometimes as high as fifteen ounces silver and four ounces gold per ton, and galena, assaying from 20 to 100 ounces silver per ton; the ore shipped averaging about $100 per ton, when sorted; in the Christian Aid the vein is apparently a vertical fissure, three feet wide, pay streak twelve inches; developments—four shafts from twenty to fifty feet in depth and aggregating 150 feet, and four tunnels from 20 to 140 feet in length and aggregating 240 feet; output forty tons.

**Alma Placer Mining Company.**—(Unincorporated); manager, W. H. Jones, Alma; office Alma; owns 640 acres of patented surface ground; situated in the basin of the Platte River, at Alma; containing probably fifty feet in depth of gravel, only a small portion of which has been worked; developments—three and one-fourth miles of ditches, supplied with water from the Platte River, and 3,000 feet of sluices; improvements—two hydraulic giants, 900 feet of piping, and one derrick; run by water-power.

**Alma Pool Association (The).**—Incorporated under the laws of Colorado, in 1876; capital stock $60,000, in 2,400 shares of $25 each, non-assessable; president, George W. Brunk, Alma; vice-president, James V. Dexter, Denver; secretary and treasurer, John T. Brownlow, Alma; office Alma; owns the Eagle and Haines lodes, 1500x300 feet each; situated on a spur of Mount Lincoln, Montgomery district, seven miles from Alma; located in 1871 and 1875, respectively; vein a contact three feet wide, containing sulphurets and antimonial silver in a lime-rock gangue, milling, when sorted, from 100 to 150 ounces silver per ton; developed by a shaft sixty feet in depth and two levels thirty and forty feet in length; output 300 tons.

**Alma Smelting Company (The).**—Incorporated under the laws of Colorado, in 1881; president, B. Hershey, Muscatine, Ia.; vice-president, A. H. Swan, Cheyenne, M. T.; secretary, J. H. Donnelly, Denver; general manager, W. Jenks, Alma; offices 11 Opera-house Block, Denver, and at Alma; owns a smelting-works, situated at Alma, the process used being the Levi Stevens patent, a combined roasting, matting, and smelting furnace, the principal feature being the utilization of all the heat units generated in combustion, the furnace being divided into three divisions in one continuous chamber, the roasting division consisting of an incline with shelves placed at regular intervals on which the ore is placed, each shelf containing a charge, the ore on the bottom shelf being first roasted, the remaining charges moving down one shelf and a new charge introduced on the upper one, and the ore taken from the bottom

shelf put into the matting division forming a part of the same chamber, after which it passes into the smelting chamber, where, by intense heat, the fusion and separation of the ore is completed, the metal being precipitated and the slag passing away in the usual manner, the furnace being of the water-jacket pattern, protected by an air-jacket through which a constant current of heated air and super-heated steam passes; by this process all the carbon is utilized, thus preventing smoke or waste of fuel.

**Alone.**—(See Lizzie and Alone.)

**American Flag.**—Mrs. Jennie Ilett, Alma, and Jno. C. James, Iowa, owners; claim 1500x300 feet; situated at the town of Buckskin, Buckskin district, two miles from Alma; located in 1879; veins both fissures about five feet, containing galena and zinc blende, assaying from twenty to thirty ounces silver per ton, in a lime and porphyry gangue; developed by a shaft thirty-two feet deep and an open cut thirty feet long.

**Amie Michigan Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, J. B. Belford; vice-president, M. H. Slifer; secretary and treasurer, N. Rollins; superintendent, C. C. Hopple; office 303 Harrison Avenue, Leadville; owns six claims, 300x1500 feet each, in two groups of three each, in the first of which the Amie is the principal, and in the second the Michigan is the principal; situated in Horseshoe Gulch, eight miles from Fairplay, Horseshoe district; located in 1879; veins all contacts in lime formation, varying in width, the lime-rock carrying galena; developments—one shaft 115 feet deep, cutting the contact, and a tunnel seventy feet long in an iron ore carrying silver, besides which there is another contact vein crossing the Amie Group, containing a body of galena ore.

**Amos.**—Louis Lieberman, Louis Berkson, and A. Rittmaster, all Alma, owners; claim 1500x300 feet; situated on Buckskin Mountain, Buckskin Joe district, two miles from Alma; located in 1879; vein a contact, varying in width, with a pay streak eighteen inches thick, containing galena, assaying $300 per ton, in a lime gangue; developed by a shaft forty feet deep.

**Anaconda.**—(See Buckeye Mining Company.)

**Anna Lull.**—W. T. McCrary, John Carman, and J. F. Hoag, all Montgomery, owners; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, one-fourth mile from Montgomery; located in 1881; vein probably a fissure, three feet wide, pay streak twenty inches, containing gold-bearing quartz (stamp-rock), yielding fairly, and iron pyrites and yellow copper (smelting-ore), assaying from $80 to $100 per ton; developed by a tunnel thirty-two feet in length.

**Atlantic.**—Wm. Bemrose, Alma, owner; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, seven miles from Alma; located in 1876, and patented in 1879; vein a fissure eight feet wide, pay streak from six to twenty inches, containing gold quartz, assaying $50 per ton; developed by a shaft 160 feet in depth, 125 feet of drifts, and three open cuts twenty feet long each; output $50,000.

**Baltic.**—(See Little Rock and Baltic.)

**Barbara.**—Ludwig Zeck, Denver, owner; Leonard Summers, Fairplay, manager; claim 1500x300 feet; situated on Pennsylvania Mountain, Pennsylvania district, six miles from Fairplay; located in 1881; vein a contact, varying in thickness, and containing gold quartz, assaying $65 per ton; developed by a shaft fifty-two feet in depth.



**Belle Fountain.**—Moses Hall, Alma, Colo., owner; claim 1500x300 feet; situated on Buckskin Mountain, Mosquito district, five miles from Alma; located in 1876, and patented in 1881; vein a fissure, three to four feet wide, pay streak eighteen inches, containing galena in a lime gangue, milling, when sorted, fifty-five ounces silver per ton; developed by two tunnels thirty-six and forty-eight feet in length.

**Belle of Buckskin Group.**—Comprising the Belle of Buckskin, Little Thunder, and T. J. Wood lodes; T. J. Wood and Louis Adrian, both Alma, owners; claims 1500x300 feet each; situated on Mt. Bross, Buckskin district; located in 1880 and 1881; veins all fissures, from four to twenty feet wide, containing galena, iron pyrites, and yellow copper, assaying eighty-three ounces silver and one-half ounce gold per ton, in a lime-rock gangue; developed by a tunnel thirty-five feet in length and two shafts ten feet deep each.

**Belle of Chicago.**—300x1500 feet; situated on the east slope of Loveland Mountain, one-half mile from Park City, Mosquito district; located in October, 1880; owners Ed. Parker, Frisco, and Jno. O'Brien, Leadville; vein a contact, three feet wide, containing galena in a lime-rock gangue, milling, when sorted, thirty per cent lead and sixty ounces silver per ton; developed by one thirty-foot shaft and thirty feet of drifting.

**Belle Peabody.**—Geo. E. Taylor, J. Joslin, and M. B. Stevens, all Leadville, and others, owners; claim 1500x150 feet; situated near Loveland Pass, Mosquito district; patented in 1881; vein probably a fissure, from two to four feet wide, containing galena in a lime-rock gangue; developed by a tunnel twenty feet in length and three open cuts fifty feet long each.

**Bemrose and Bostwick Placer.**—Wm. Bemrose, Alma, and Henry M. Bostwick, Denver, owners; claim covers 266 88-100 acres; situated in Hoosier Gulch, Montgomery district, seven miles from Alma; located in 1860, and patented in 1880; developed by two ditches one and one-fourth and two miles in length, and two flumes 100 and 250 feet in length, and some other workings.

**Berlin Group.**—Six claims, 300x1500 feet each, viz.: Berlin, Florence, Como, Milan, Huron, and Birmingham; Lyman Fay, Alma, owner; group situated on the east slope of Mt. Bross, Montgomery district, four miles from Alma; vein a contact, varying in width, and containing segregated pockets of silver, copper, and iron sulphides, scattered irregularly through the lime, assaying 100 ounces silver per ton; developed by four tunnels, 40, 60, 70, and 105 feet in length.

**Berlin Mining Company.**—Incorporated under the laws of New York; general manager, Jno. T. Herrick, Fairplay; offices New York and Fairplay; owns the Key, Henry D. and Ajax, three patented and adjoining claims on the same vein as the London Mining Company's property; situated on the Mosquito slope of Pennsylvania Mountain, beginning at South Mosquito Creek, six miles from Alma, Mosquito district; vein a fissure, from twenty to forty feet wide, in a formation the same as the London, and containing ore similar in character and quality, allowing for the difference in development, which consists of about 700 feet of tunneling, the mineral in this vein invariably improving with depth; also owns 120 acres of placer ground, adjoining the lode claims.

**Big Cincinnati Group.**—Comprising three claims, viz., Big Cincinnati, Merrimac, and Molly Gorman, 1500x300 feet each; F. F. Mullen, Alma, and F. C. Sands, Ottawa, Kas., owners; group situated on Mt. Bross, Montgomery district, three miles from Alma; located 1880; vein a horizontal

contact, four feet wide, pay streak three inches, containing galena and yellow copper, assaying $70 per ton, in a lime-rock gangue; developed by three shafts twenty-two feet deep each.

**Bijou.**—Geo. R. Gwynn, Alma, owner; claim 1500x300 feet; situated on Mosquito Gulch slope of Pennsylvania Mountain, Mosquito district, four miles from Alma; located in May, 1880; vein a fissure, five feet wide, pay streak from six to eighteen inches, containing galena in a lime-rock gangue, milling, when sorted, five per cent lead and eighty-one ounces silver per ton; developed by a shaft eighteen feet and two tunnels thirty-two and forty feet in length.

**Black Barnett Consolidated Mining Company (The).**—Incorporated under the laws of West Virginia, in December, 1880; capital stock $250,000, in 50,000 shares of $5 each, non-assessable; president, Daniel U. Chamberlin; secretary and treasurer, Geo. A. Allison—both Boston, Mass.; superintendent, C. L. Lightburn, Alma; offices No. 3 Commercial street, Boston, Mass., and Alma; owns the Black Barnett, Black Barnett No. 2, Little Mary, Helen, and Cambridge lodes, 1500x300 feet each; situated at the head of Buckskin Gulch, Buckskin district, five miles from Alma; located from 1879 to 1881, and Little Mary patented; veins all fissures, from two to fourteen feet wide, pay streaks twenty inches, containing galena, sulphurets, and gray, and yellow, and green copper, in a lime-rock gangue, milling, when sorted, from 50 to 300 ounces silver per ton; Black Barnett developed by an open cut twenty feet in length and two shafts fifty feet deep each; Black Barnett No. 2 by two shafts forty feet deep each and a tunnel 600 feet in length; and others by shafts and tunnels aggregating 500 feet; output 150 tons.

**Black Eagle.**—J. W. Strong and others, Dodge City, Kas., owners; claim 1500x170 feet; situated on North Star Mountain, Montgomery district, nine miles from Alma; located in 1881; vein a fissure, varying in width, pay streak thirty-two inches, containing gold-bearing quartz, galena, and yellow copper, assaying from $50 to $800 per ton; developed by an adit twelve feet in length.

**Big Ernest.**—(See Ernest Mining Company.)

**Boaz Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, T. E. Stuart, Boston, Mass.; vice-president, Jeremiah A. Greenlaw, Park City; treasurer, H. R. Calkins, Leadville; secretary and general manager, Ronald A. Stuart, Park City; office Leadville and Park City; owns the Charles XII., Centennial, Mountain Star, Louisiana, and Little Stella lodes, 1500x300 feet each; situated on the south slope of Loveland Mountain, Mosquito district, one and one-half miles from Park City, Colo.; Charles XII. located in July, 1874, and the others previous to 1879; vein in the Charles XII. a fissure, from four to six feet wide, pay streak from six to twenty-four inches, containing galena, lead carbonates, and sulphurets, in a lime gangue, milling, when sorted, from fifteen to twenty-five per cent lead, one-tenth ounce gold, and from fifty to seventy-five ounces silver per ton; veins on the other claims contacts, varying in width, the ore, however, being similar to that in the Charles XII.; the Mountain Star showing an eighteen-inch mineral streak, carrying galena and sulphurets, and the Louisiana about the same quality of ore, while the Little Stella has a quartz formation similar in character to the Fanny Barrett; the developments consisting of seven tunnels from 30 to 225 feet in length, with some other workings; improvements—shaft-house, ore-house, boarding-house, etc.; output two tons per day.



**Bobtail.**—John Romer, Dudley and James Bonner, Alma, owners; claim 1500x300 feet; situated on Mount Bross, Montgomery district, three-fourths mile from Dudley; vein probably a fissure, varying in width, containing iron pyrites, assaying from two to four ounces gold per ton, in a lime-rock gangue; developed by a tunnel thirty feet in length and a shaft thirty-six feet deep.

**Bonanza King Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, Dr. E. J. Ogden; vice-president, C. H. Colburn; secretary and treasurer, F. T. Fitch—all Chicago; superintendent, M. A. Lawrence, Alma; owns the Bonanza King, 1500x300 feet; situated on the west slope of Buckskin Mountain, Mosquito district, six miles from Alma; located October 8, 1881, and patented in June, 1882; vein a vertical fissure, with granite walls, a crevice four feet in width, and two pay streaks, one on each wall, from six to ten inches in width, containing sulphides and some chlorides, in a lime gangue, milling, when sorted, from 50 to 150 ounces silver and one-fourth ounce gold per ton; developed by two shafts thirty-one and sixty-five feet deep, the latter striking the vein at a depth of fifty-six feet, a drift on the vein twenty-one feet long, designed to open up another quartz fissure vein; worked by an eight-horse-power engine and boiler.

**Bonnie Eva.**—A. H. Johnson and H. J. Stephens, both Alma, Colo., owners; claim covers seven acres; situated on Buckskin Mountain, Mosquito district, three and one-half miles from Alma; located in June, 1880; vein a contact, from one to four feet wide, containing galena and yellow copper in a lime-rock gangue, milling, when sorted, twenty-eight ounces silver and one-fourth ounce gold per ton; developed by a shaft forty-five feet in depth and three tunnels, ten, twenty, and twenty-five feet in length.

**Boone Group.**—A. K. Fuller and F. F. Mullen, both Alma, owners; group comprises five claims, 1500x300 feet each; situated on the south-east slope of Democrat Mountain, Buckskin district; located in February, 1880; veins all fissures from one to two and one-half feet wide, pay streaks from eight to fourteen inches, containing galena and gray copper in a lime-rock gangue, milling, when sorted, from $75 to $100 per ton; developed by two tunnels sixteen and forty feet in length and three shafts from sixteen to twenty feet in depth.

**Boston.**—F. F. Mullen, Alma, owner; claim 1500x300 feet; situated on Mosquito Mountain, Mosquito district, two and one-half miles from Alma; located in 1880; vein a horizontal contact five feet wide, pay streak five inches, containing galena and yellow copper, assaying $120 per ton, in a lime-rock gangue; developed by three open cuts fifteen feet long each.

**Brighton.**—Leonard Summers and Sherwood & Co., both Fairplay, owners; claim 1300x300 feet; situated on Mosquito Mountain, Mosquito district; located in 1879; vein probably a fissure, six and one-half feet wide, pay streak one foot, containing quartz carrying gold and silver, which assays $125 per ton; developed by forty-three feet of shafts.

**Broad-gauge.**—Thos. T. Willey, Fairplay, and Francis M. Ramey, Springfield, Mo., owners; claim 1500x300 feet; situated in Beaver Creek district, seven miles from Fairplay; located in 1873; vein a contact four feet thick, containing porphyry and lime-rock, with copper pyrites and galena, milling, when sorted, from $12 to $15 per ton; developed by one shaft forty feet in depth and an eighty-foot open cut.

**Buckeye Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1880; president and treasurer, M. M. Pomeroy, Denver; secretary and general manager, J. P. Ibson, Alma; offices 433 Larimer street, Denver, and Alma; owns the following claims: Anaconda, Satisfaction, and Millionaire, 300x1500 feet each; situated on Mount Bross, adjoining the Pennsylvania Consolidated Mining Company's property, two and one-half miles from Alma; located in 1878 and 1880, and the first in process of patent; veins all fissures, dipping seventy-five degrees, and from one to six inches wide, pay streaks from one to eight inches, containing galena, gray and yellow copper, and some sulphurets, with lead and iron carbonates, in a lime-rock gangue, milling, when sorted, from $50 to $75 per ton; developments—on Anaconda one tunnel 137 feet long, three open cuts, twenty-five, twenty-four, and twenty-two feet in length, one twenty-foot shaft, and one thirty-foot drift, on Satisfaction one fifteen-foot shaft, and on Millionaire one forty-five-foot shaft and three ten-foot open cuts; improvements—ore-houses, shaft-houses, etc.

**Buckskin Mining and Fluming Company (The).**—Incorporated under the laws of Colorado, in 1865; capital stock $20,000, in 2,000 shares of $10 each, non-assessable; president, Isaac Ware, Montezuma; vice-president, Wm. Knight, Crested Butte; secretary and treasurer, W. H. Grose, Alma; office Alma; owns 110 acres of placer ground, ninety of which was patented in January, 1882; situated in Buckskin Gulch, Buckskin district, one-half mile west of Alma; developed by 1,300 feet of fluming and one-half mile of ditches; with some improvements.

**Buckskin Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $3,000,000, in 300,000 shares of $10 each; president, N. Rollins; vice-president, P. McCauley; secretary and treasurer, U. B. Wilson; superintendent, John McAndrews; office 303 Harrison Avenue, Leadville; owns fifteen claims, covering over 100 acres, viz.: Queen Mary, Bullion, Eclipse, Three Sisters, McClellan, N. Rollins, Cornucopia, Hancock, General Grant, Uncle Sam, Brakeley, Golden Outcrop, Archibald, Hattie B., and Golden Eagle; situated on the divide between Buckskin and Mosquito Gulches, in the districts of those names; on which the Company is doing development work, one tunnel forty feet long showing solid iron and galena, and all the veins containing silver and more or less gold.

**Buena Vista.**—Dr. O. H. Pierson, New York, owner; manager, H. H. Richardson, Alma; claim 1500x300 feet; situated on Mosquito Mountain, Buckskin district, two and three-quarters miles from Alma; located in 1880; vein probably a fissure, four feet wide, pay streak eight inches, containing galena, assaying forty ounces silver per ton, in a lime-rock and porphyry gangue; developed by a drift on the vein eighteen feet in length and a cross-cut tunnel twenty feet long.

**Bush.**—300x1500 feet; situated on the south slope of Argentine Mountain, one-half mile from Boreas, Argentine district; located in January, 1882; owners T. W. Graves and James Bush, both Breckenridge; vein a fissure five feet wide, pay streak ten inches, containing gray copper and quartz, assaying twenty-five per cent copper and from 25 to 200 ounces silver per ton; developed by one sixty-five-foot shaft.

**Buster.**—(See Greenhorn and Buster.)

**Castor Group.**—Three claims, 300x1500 feet each, viz.: Castor, Castor Extension, and Pollux lodes; S. S. Culbertson and Daniel Stewart, both Alma, J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; group situated in North Star Mountain, one and one-half miles from Montgomery, Montgomery district; located in 1881; veins both fissures from five to



seven feet wide, containing gold-bearing quartz (stamp-rock), yielding fairly, and iron and copper pyrites (smelting-ore), assaying five per cent copper and $35 in gold per ton; developed, respectively, by a fifteen-foot shaft, a twenty-five-foot shaft, and thirty-foot tunnel; improvements—one cabin; output on dumps 150 tons.

**Cheever Gold and Silver Mining Company (The).**—Incorporated under the laws of New York in 1882; president, Rees P. Sewyer; vice-president, John H. Devine; secretary, George W. Clark; treasurer, Samuel B. Mower—all New York; general manager, H. H. Richardson, Alma; offices Rooms 9 and 10, 243 Broadway, New York, and Alma; owns the Cheever lode, 300x1500 feet; situated on Mt. Bross, Buckskin Joe district, two miles from Alma; located in April, 1881; vein a contact three feet wide, containing carbonates, assaying sixty ounces silver per ton, in a lime gangue; developed by two open cuts eighteen and twenty feet in length.

**Chicago Group.**—Seven claims, 1500x300 feet each; Mrs. Sophie Hoffman, Dudley, owner; claims situated on Mt. Lincoln and at the head of the Platte River, Montgomery district, fourteen miles from Alma; located in 1880 and 1882; veins all fissures from eight to ten feet wide, containing gold and silver bearing quartz (stamp-rock), yielding fairly, and iron pyrites (smelting-ore), assaying twenty ounces silver and a trace of gold per ton; developed by six twenty-foot open cuts, a shaft twelve feet in depth, and a tunnel twelve feet long.

**Chicago Group.**—Consisting of Chicago, Robert Burns, and another claim; J. L. Welch, Johnson Taylor, Israel White, and Isaiah Ramsey, all Alma, owners; claims 1500x300 feet each; situated on North Star Mountain, Montgomery district, seven miles from Alma; located in April, 1882; veins all fissures four feet wide, containing gold and silver bearing quartz, assaying $30 per ton; developed by a ten-foot open cut on each claim.

**Cleaner.**—(See Criterion Group.)

**Cliff.**—J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, one and one-half miles from Montgomery; located in 1881; vein a fissure five feet wide, containing iron pyrites, assaying one ounce gold and fifteen ounces silver per ton, in a lime-rock gangue; developed by a tunnel fifteen feet in length.

**Cliff and New York.**—Owned by Tingley S. Wood, Leadville, and B. F. Clarke, Chicago; claims 1500x300 feet each; situated at the head of Mosquito Gulch, Mosquito district; vein a contact from three to four feet in width, pay streak from six to twenty inches, containing galena and sulphurets, assaying from 75 to 100 ounces silver per ton, in a lime-rock gangue; developed by two tunnels 70 and 175 feet in length, respectively, the latter in ore, and some other workings.

**Colorado Springs Group.**—Comprising the Colorado Springs, Becker, Tiger, Dominion Boy, Ottawa Boy, Duke of Edinburgh, White, Cowell, Mullen, and Irene lodes, 1500x300 feet each; owners W. J. Mullen, Alma, Peter Becker and D. A. Cowell, both Leadville, and C. H. White, Colorado Springs; situated on the west slope of Mt. Bross, Buckskin district, five miles from Alma; located in 1879-80, Colorado Springs, Becker, Dominion Boy, and Ottawa Boy patented, and others in process of patenting; veins all contacts, with lime and porphyry walls from ten to seventy inches in thickness, containing segregated pockets of galena, copper pyrites, and some silver glance, scattered through the lime, milling, when sorted, from $100 to $150 per ton;

there is also on this property three vertical veins from one to five feet wide, with pay streaks from three to nine inches, containing yellow copper and galena in a lime-rock gangue, milling, when sorted, two ounces gold and seventy-five ounces silver per ton; developments—three tunnels, sixty, forty, and twenty-five feet long, two shafts forty-one and twenty feet deep, and 500 feet of drifts and levels; output forty tons.

**Columbus.**—(See Davis and Columbus).

**Comet Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, March 22, 1883; capital stock $900,000, in 90,000 shares of $10 each, non-assessable; president, Hugh Butler; secretary and treasurer, H. C. Frost—both Denver; vice-president and general manager, J. Granville Sharp, Hall Valley; offices 54 Charles Block, Denver, and Hall Valley; owns four patented claims, 1500x50 feet each, viz.: Whale, Leftwick, Comet, and Adriatic; situated on the Hall Valley slope of Bullion Mountain, nine miles from Webster, Hall Valley district; veins all fissures, in a granitic gneiss formation, and in the Whale from one to eight feet wide, and averaging three feet, pay streak from one to thirty inches, and probably averaging six inches, containing galena and gray copper, accompanied by a very little iron pyrites and chalcopyrite in a quartz and heavy-spar gangue, milling, when sorted, from fifteen to twenty per cent lead and from 75 to 125 ounces silver per ton; developments—four levels on the vein, 230, 405, 600, and 750 feet in length, with considerable stopes and other workings; in the Leftwick, pay streak from three to twenty-four inches, containing a similar ore to that in the Whale, and perhaps a little higher grade, carrying some ruby and native silver; developed by six levels aggregating 2,000 feet and some other workings; and in the Comet and Adriatic the developments are less extensive, but in each large ore bodies are exposed; also owns a concentrator and reduction-works; situated on one of the Company's mill sites, at Hall Town, four and one-half miles from the mines, with which it is connected by a tram-way; works contain two Embry Tables, one amalgamator, and one chloridizing-furnace, besides two saw-mills, ore-houses, coal-bins, store and dwelling houses, etc.

**Commercial.**—300x1500 feet; situated at the head of Buckskin Gulch, in the center of the horseshoe formed by the union of Mts. Bross, Lincoln, and Cameron, Buckskin district; owners S. H. Jenkins and J. F. Cummins, both Denver; vein a fissure, three feet wide, pay streak from five to fifteen inches, containing galena, gray copper, sulphurets, and quartz, with some carbonates of magnesium, milling, when sorted, about $40 in gold and silver; developments—one tunnel 100 feet long and one twenty-five-foot shaft, with sixteen feet of drifting therefrom.

**Comstock.**—300x1500 feet; situated at the head of the Platte River, Montgomery district; located in May, 1880; owner Archie McDonald, Jr., Alma; vein a fissure, 100 feet wide; character of ore—gold-bearing quartz, on which assays have been obtained from one-half to seven and one-half ounces gold per ton; developments—one tunnel thirty feet long and one discovery shaft.

**Congress.**—A. H. Johnson and H. J. Stephens, both Alma, and others, owners; claim 1500x300 feet; situated on Buckskin Mountain, Mosquito district, three and one-half miles from Alma; located in 1878; vein a vertical contact from one to four feet in width, pay streak twelve inches, containing galena and yellow copper in a lime and porphyry gangue, milling, when sorted, from ten to sixty per cent lead and from ten to twenty-five ounces silver per ton; developed by two tunnels 140 and 25 feet in length and a shaft forty-five feet in depth; output fifty tons.



**Connoran.**—300x1500 feet; situated on Buckskin Mountain, at Timberline, between Cooper Gulch and Buckskin Creek, Buckskin district, and patented; owners James Connoran, Park City, C. E. Newton and L. H. R. Hatton, both Leadville; vein a fissure, in a stratified formation of lime and quartzite, alternating with each other in layers, and at the contact of which are pockets of mineral similar to those of the main vein; ore—galena, sulphurets, and lead carbonates, appearing in segregated pockets, generally in the lime, milling, when sorted, about fifty ounces silver per ton; developed by one fifty-foot shaft and some drifting.

**Criterion Group.**—Consisting of four claims, 300x1500 feet each, viz.: the Criterion, Cleaner, Cleaner No. 2, and Caroline, and the Criterion Mill site, adjoining; situated on the Buckskin Gulch slope of Mt. Bross, two and one-half miles from Alma, Buckskin Joe district; owners Capt. W. H. Kingsbury, Denver, and others; vein a contact, varying in width, and the ore body is apparently one of the largest in its vicinity, and probably the only free-fluxing mineral in Buckskin district, some of it milling as high as forty-five per cent in lead; developments—one main working tunnel 230 feet long, with considerable shafts and winzes; improvements—one tram-way 592 feet long, equipped with double tracks carrying two cars of two tons capacity each, connecting the mouth of the tunnel with the dump below, the latter having a capacity of 200 tons, with two chutes for loading onto wagons; the ore in this property being so easily mined, and the facilities for handling it so good that it can be taken out of the mine and shipped to Alma for treatment at a cost of less than $3 per ton.

**Crusader Mining and Smelting Company (The).**—Incorporated under the laws of New Jersey, in September, 1881; capital stock $300,000, in 100,000 shares of $3 each, non-assessable; president, A. A. Nickerson; secretary and treasurer, S. Lawrence French—both Boston, Mass.; general manager, J. F. Campion, Leadville, Colo.; office corner Harrison Avenue and West Sixth street, Leadville; owns the following lodes: Crusader, Magna Vista, Monarch, Stormy Petrel, Residue, and one other, 1500x300 feet each; situated on Horseshoe Mountain, Horseshoe district; located in 1877, and patented in 1881; veins probably contacts, from two to four feet wide, containing galena in a lime-rock gangue, milling, when sorted, twenty per cent lead and twenty ounces silver per ton; developed by six shafts from 56 to 115 feet in depth and some other workings; output 2,000 tons.

**Dauser.**—Jeremy Mackey and Geo. Stone, both Park City, and J. C. Hart, Rochester, N. Y., owners; claim 1500x300 feet; situated on Pennsylvania Mountain, Mosquito district, three-fourths mile from Park City, and patented in April, 1881; containing six vertical fissure-veins, from one to twenty-four feet in width; ore—galena with iron and copper pyrites and some mineralized quartz, assaying forty per cent lead, from one to two ounces gold, and from ten to fifteen ounces silver per ton; developed by two tunnels 135 and 60 feet in length and four shafts from thirty to fifty feet in depth, with considerable surface-workings; output 200 tons on the dump, and it is estimated that there are 500 tons in sight.

**Davis and Columbus.**—S. S. Snodgrass, Robert Snodgrass, and A. J. Sterling, all Leadville, and B. W. Davis, Columbus, Ohio, owners; claims 1500x300 feet each; situated on London Mountain, Mosquito district, four miles from Park City; located in 1881; veins both fissures, averaging six and one-half feet in width, containing gold and silver bearing quartz, assaying $25 per ton in gold and silver; developed by an incline thirty feet in length.

**Denver City.**—Thomas Doran and others owners; claim 1500x300 feet; situated on the north slope of Silver Heels Mountain, Tarryall district,

six miles west of Como; located in 1882; vein has defined walls and a crevice three feet wide, and a pay streak six inches, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by a tunnel seventy feet in length and a shaft twenty feet deep.

**Des Moines Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, December 17, 1881; capital stock $1,000,000, in 20,000 shares of $50 each, non-assessable; president, A. E. Keables, Alma; vice-president, E. H. Keables, M. D., Pella, Ia.; secretary, T. E. McCumpsing; treasurer, F. D. Jewett—both Alma; office Alma; owns seven claims, 300x1500 feet each, viz.: Ruby, Randall, and Princess; situated on the east slope of Mt. Bross, three miles from Alma; veins all fissures, in the first thirty-six inches wide, containing quartzite, galena, and sulphurets, assaying fifty per cent lead, considerable gold, and twenty ounces silver per ton; developed by an open cut and tunnel eighty feet long and one thirty-five-foot shaft, the other two being only slightly developed; and Jim Fisk, Bonanza, Homestake, and Queen of Sheba; situated on the west slope of Mt. Cameron, seven miles from Alma; Jim Fisk containing a fourteen-inch pay streak of galena and quartzite, assaying twenty per cent lead and over 200 ounces silver per ton; developed by one twenty-foot tunnel on the vein; Bonanza containing a four-inch pay streak of galena, assaying fifteen per cent lead and from ten to twenty ounces silver per ton, in a quartzite gangue; developed by one twenty-foot tunnel; and Queen of Sheba vein six feet wide, containing quartz, assaying from one-half to two ounces gold per ton; only slight developments; all these claims are in the Buckskin district, and were located from 1878 to 1880.

**Detroit.**—Owners M. A. Lawrence, Alma, and J. Minihan, Park City; claim 1500x300 feet; situated at the head of Mosquito Gulch, Mosquito district, six and one-half miles from Alma; located in September, 1879; vein a vertical fissure ten feet wide, containing quartz showing streaks of mineral heavily stained with copper and carrying gold, assaying from one-fourth to one and one-half ounces gold per ton; developed by one shaft twenty-two feet in depth and an open cut twenty-two feet long.

**Detroit City.**—(See J. B. Grant Silver Mining Company.)

**Dodge City Mining Company (The).**—Incorporated under the laws of Kansas and Colorado, in February, 1881; capital stock $100,000, in 1,000 shares of $100 each, non-assessable; president, H. M. Beverley; vice-president, A. B. Webster; secretary, J. S. Welch; treasurer, R. H. Rice—all Dodge City; manager, John W. Strong, Alma; offices Dodge City and Alma; owns the following claims: Beverley, County Line, Romeo, Diana, and White Swan, 1500x300 feet each; situated on the south slope and top of North Star Mountain, Montgomery district, seven miles from Alma; located in August and September, 1881; veins all fissures, from two to five feet wide, pay streaks from ten to twenty inches (in the Romeo there are two, three and twelve inches), containing gold and silver bearing quartz (stamp-rock), yielding fairly, and iron and copper pyrites (smelting-ore), assaying from $35 to $50 per ton; developments—one forty-foot tunnel and four shafts from fifteen to twenty-five feet deep, with some improvements.

**Dolly Varden.**—(See Hall and Brunk Silver Mining Company.)

**Double Standard.**—(An extension of the Orphan Boy); 300x1500 feet; situated in Mosquito Gulch, three miles from Alma, Mosquito district; patented in 1883; owner James Moynahan, Alma; vein a fissure, four feet wide, with granite walls, containing gold-bearing quartz, and iron and copper pyrites, milling probably an average of $18 per ton; developments—one seventy-five-foot shaft with fifty feet of drifting.



**Dr. Livingstone.**—Wm. Livingstone, Dudley, Colo., owner; claim 1500x300 feet; situated on Mt. Bross, Montgomery district, two miles from Alma; located in 1880; vein probably a fissure, varying in width, pay streak six inches, containing gold and silver bearing quartz; developed by one shaft thirty feet in depth.

**Dubuque.**—Leonard Summers, Fairplay, owner; claim 1500x300 feet; situated on Pennsylvania Mountain, Sacramento district, six miles from Fairplay; located in 1878; vein probably a fissure, two feet wide, pay streak twenty inches, containing galena, assaying 100 ounces silver per ton, in a lime and porphyry gangue; developed by one tunnel fifty feet in length.

**Dunderberg.**—(See Galena Group.)

**Dyer and Breckitt Placer.**—Covering 200 acres; situated near Mosquito Creek, Mosquito district; Dyer and Breckitt owners; developed by a ditch three and one-half miles in length and a shaft fifty feet in depth.

**Eagle.**—(See Alma Pool Association.)

**Easton of Pennsylvania Consolidated Silver Mining and Milling Company (The).**—Incorporated under the laws of Colorado; president, R. T. Fair; vice-president, Jno. E. Flint; secretary, S. W. Hawkes; treasurer, M. A. Preston; owns four claims, viz.: Melissa and Happy Bachelor; situated on the Buckskin Gulch slope of Buckskin Mountain, near the Fanny Barrett, Buckskin district, the former of which has three contact veins with lime and quartzite walls, the first containing sand carbonates carrying both silver and gold, the second a decomposed black matter carrying gold, and the third galena, black iron, and iron pyrites, in a lime and porphyry gangue, mill-runs of sorted ore averaging $40 per ton, and the latter a vein three feet wide, containing quartz and galena, assaying from twenty-five to seventy-five ounces silver per ton; developments—three shafts from twenty-five to thirty-five feet in depth each; worked by steam machinery; and the R. T. Fair and Uncle Tom; situated on Pennsylvania Mountain, near the Hock-Hocking, Mosquito district; the former containing an eighteen-inch carbonate vein, assaying $60 per ton; developed by two forty-five-foot shafts, showing an ore assaying forty ounces silver per ton.

**Elegant Group.**—Comprising the Elegant, Nesbitt, Bond, and Badger, 1500x300 feet each, and the Echo, 1500x65 feet; George Jess, Waupun, Wis., David Metcalf, Fox Lake, Wis., and T. D. Howe, Alma, owners; claims situated on Pennsylvania Mountain, Mosquito district, four miles from Alma; located in 1879, and patented in January, 1882; vein a contact of the overlying lime-rock with the porphyry underneath the lime, being from sixty-five to 125 feet in thickness, containing segregated deposits of galena and zinc blende scattered through it, assaying thirty ounces silver per ton; developed by seven shafts from 11 to 120 feet in depth, and aggregating 358 feet, and four drifts aggregating 183 feet.

**Emma Group.**—Comprising the Emma, Vanderbilt, and Pocahontas, 1500x300 feet each; Wm. G. Remlin and David Miller, both Fairplay, owners; claims situated in the Sacramento district, seven miles from Fairplay, and located in 1876; vein a contact from one to two feet in width, pay streaks from three to twelve inches, containing galena and sulphurets, assaying thirty-six per cent lead and twenty-four ounces silver per ton; developed by a tunnel 170 feet in length, a shaft seventy feet in depth, and sixty feet of levels.

**Ernest Mining Company (The).**—Incorporated under the laws of Colorado, in October, 1880; capital stock $1,000,000, in 10,000

shares of $100 each, non-assessable; president, L. H. Withey; secretary and treasurer, J. M. Barnett—both Grand Rapids, Mich.; general manager, B. F. Joslin, Alma; offices Room 31 Tabor Block, Denver, and Alma; owns the Big Ernest lode, 1500x600 feet; situated on Loveland Mountain, Buckskin district, two miles from Alma; located in 1879, and patented in 1880; vein a contact of the overlying lime with the quartzite underneath, the lime-rock from 100 to 300 feet thick and at least 150 feet wide, containing seams or streaks of galena with some native silver, milling, when sorted, from twenty-five to fifty ounces silver per ton; developed by five tunnels from 55 to 170 feet in length and three shafts, ten, twenty, and eighty feet in depth, with some other workings; improvements—two ore-houses, connected by a 100-foot chute; output twenty tons shipped and 1,500 tons on the dumps awaiting treatment.

**Ethel Group.**—Comprising the Ethel, Smuggler, and Alpine lodes; J. B. Puckett, H. R. Baird, John Baird, and Martin Grove, all Alma, owners; claims 1500x300 feet each; situated on Mount Bross, adjoining the Moose property, Montgomery district, five miles from Alma; located in 1882; vein probably a fissure, two feet wide, containing galena and sulphurets, assaying two ounces gold and 100 ounces silver per ton, in a lime-rock gangue; developed by three tunnels twelve feet in length, one on each claim.

**Eureka.**—Owner M. A. Lawrence, Alma, Colo.; claim 1500x300 feet; situated on the west slope of Buckskin Mountain, Mosquito district, six and one-half miles from Alma; located in 1880; vein a vertical fissure in a quartzite formation, three feet wide, pay streak ten inches, containing quartzite, carrying silver, assaying from $10 to $40 per ton; developed by three tunnels, ten, twelve, and eighteen feet long.

**Fair Berry.**—Wm. Hill and Thos. W. Duffy, both Alma, owners; claim 1500x300 feet; situated on Mount Lincoln, Montgomery district, seven miles from Alma; located in 1880, and in process of patent; vein a contact, or a lime-rock formation 100 feet thick, overlying the quartzite, the lime-rock containing segregated pockets or deposits of galena and sulphurets, milling, when sorted, from 50 to 250 ounces silver per ton; developed by four shafts twelve feet deep each, three tunnels, 45, 120, and 125 feet in length, and two fifteen-foot open cuts, with some other workings and improvements; output probably $100,000.

**Fairplay Sampling Works.**—E. C. Briggs and A. E. Vandeusen, both Fairplay, owners; works established in July, 1882; comprising main sampling-building, 95x40 feet, containing Dodge Crusher, Cornish Rolls, etc.; motive power supplied by a thirty-horse-power engine; capacity eighty tons per day (twenty-four hours).

**Fannie Barrett Mining Association.**—Incorporated under the laws of Colorado, in —— 1879; capital stock $10,000,000, in 1,000,000 shares of $10 each, non-assessable; president, Hon. W. A. H. Loveland, Denver; secretary and treasurer, Wm. Pitt Shearman, New York City; superintendent, A. H. Clements, Denver; office Room 53, 115 Broadway, New York, and Room 12 Tabor Block, Denver; owns sixteen claims, 300x1500 feet each, viz., Oriole, Lady Della, Asteroid, Argentum, Rarus, Mars, Pride of the Hills, Queen Extension, Evening Star, Silver Steam, Mountain King, Mountain Queen, Belle Front, Lady Anna, Luna, and Solaris, and one placer claim, twenty acres (the Loveland P.), covering altogether a strip of ground nearly one and one-half miles in length and extending entirely across Loveland Mountain, from Buckskin to Mosquito Gulch, two and one-half miles from Alma, Buckskin and Mosquito districts; located from 1873 to 1879, one-half of which is held by U. S. patents; throughout almost the entire length of which the presence and continuity of a large and nearly vertical fissure vein is established, indicating, wherever opened, bodies of pay ore, the top of the mountain being covered with limestone, with alternating layers of quartzite, to the depth of about 500 feet, between which layers are contact veins of argentiferous ores, very similar in general characteristics to those of the fissure, except that they are, if anything, higher in silver, the ore being principally carbonate of lead and galena, intermixed with oxide of manganese and carbonate of iron with a calcareous sand gangue, the mixed carbonates and galena assaying from fifteen to fifty per cent lead and from 10 to 150 ounces silver per ton, and the manganesian iron oxide and carbonate assaying from one to ten per cent lead and from fifteen to seventy ounces silver per ton; developments—two tunnels 130 feet in length each on the Buckskin slope, two tunnels eighty feet long each on the Mosquito slope, two shafts 80 and 175 feet deep, the latter the main working shaft, from which there is about 700 feet of levels, with numerous drifts, winzes, upraises, etc.; output probably 1,300 tons, all of which have been discovered in the progress of development; over 500 tons of which have been treated, realizing over $25,000, the remaining 800 lying on the dumps for treatment at the Company's smelter.

And owns a smelting-works erected on a thirteen-acre patented mill site, at Alma, and consisting of furnace-building, 20x30 feet, and two stories, containing furnaces, Blake Crusher, Cornish Rolls, and elevator; sampling-house, 30x40 feet, containing a fifty-horse-power engine; pump-house, 16x20 feet, containing two Worthington pumps; ore-house, 30x150 feet, capable of holding 1,000 tons of ore; laboratory, assay-room, and scale-house, 24x36 feet, and two stories high; capacity of works thirty tons in twenty-four hours.



**Fanny Morris.**—Owners M. A. Lawrence, Alma, and S. C. Whiting, Laporte, Ind.; claim 1500x300 feet; situated on the west slope of Buckskin Mountain, Mosquito district, three and one-half miles from Alma; located in June, 1880; containing two fissure veins, with pay streaks twelve and twenty inches wide; ore—decomposed quartz and hematite iron, which assays from five to twenty-five ounces silver per ton; developed by three tunnels, five, sixteen, and eighty feet long.

**Florence.**—L. Y. Redd and Gideon Baker, both Como, owners; claim 1500x300 feet, situated on the east slope of Bald Mountain, Redd district, ten miles west of Como; located in 1880; vein a contact, four feet in width, containing iron and copper pyrites carrying gold and silver in a quartz gangue-matter; developments—one shaft thirty-two feet in depth.

**Galena Group.**—Comprising the Dunderberg, Clara Falls, Wisconsin, Ibex, Expert, Bobtail, and two other lodes; B. F. Joslin, Alma, owner; claims 1500x300 feet each; situated on Democrat Mountain, Montgomery district, nine miles from Alma; located in 1880; veins all fissures, five feet wide, containing galena in a quartz gangue, milling, when sorted, seventy-three per cent lead and thirty-eight ounces silver per ton; developed by eight tunnels from ten to thirty feet in length.

**Gallagher, Nos. 1 and 2.**—A. Gallagher and Mrs. E. D. Killduff, both Alma, owners; claims 1500x300 feet each; situated on Mt. Bross, Montgomery district, two miles from Alma; located in 1879; vein a contact, or a lime formation overlying the quartzite underneath, the lime-rock containing segregated pockets of mineral, as shown by one thirty-foot shaft.

**Galveston.**—Thomas W. Duffy, Alma, owner; claim covers eight and one-tenth acres; situated on Mt. Bross, Buckskin district, one and three-fourths miles from Alma; located in 1880, and patented in September, 1882; vein a horizontal contact, six feet wide, containing galena and yellow copper, assaying from thirty to sixty ounces silver per ton, in a lime-rock gangue; developed by an open cut thirty feet long and two tunnels sixteen and twenty feet in length.

**Gem.**—Geo. F. Classon, Montgomery, owner; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, six and one-half miles from Alma; located in 1881; vein a fissure, four feet wide, pay streak twenty-five inches, containing gold-bearing quartz, assaying $35 per ton; developed by a tunnel twenty-five feet long.

**Gertrude.**—James P. Shallcross, St. Louis, Mo., and Felix McLaughlin, Fairplay, owners; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, seven miles from Alma; patented in 1878; vein a contact, or a lime formation, from 100 to 400 feet thick, overlying the porphyry underneath, the lime-rock containing segregated deposits of galena and magnetic iron, with some copper, milling, when sorted, from 100 to 200 ounces silver per ton; developed by two tunnels 80 to 125 feet in length and a forty-foot shaft; output probably $12,000.

**Giant Silver.**—M. J. Bartley, Fairplay, owner; claim covers seven and one-half acres; situated in the Mosquito district, eight miles from Fairplay; vein a contact, sixteen inches wide, pay streak four inches, containing galena and copper pyrites in a lime-rock gangue, milling, when sorted, seventy per cent lead and twenty ounces silver per ton; developed by one tunnel seventy-nine feet in length, thirty-foot drift, and two shafts eleven and twenty-five feet in depth.

**Glasgow Silver Mining Company (The).**—Incorporated under the laws of Colorado, October 20, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Nelson Hallock, Denver; vice-president, R. H. Buck; secretary, C. W. Buck—both Leadville; manager, Geo. R. Gwynn, Alma; office 104 East Fourth street, Leadville, and at Alma; owns three claims, 300x1500 feet each, viz.: Iron, situated on the south slope of Mt. Bross, four miles from Alma, Buckskin district; located in June, 1879; vein a horizontal contact, with lime and schist walls from three to six feet thick, covered by an iron cap twenty feet thick, and containing iron pyrites, milling thirty-five per cent iron, and worth $2 per ton on the dump for fluxing purposes, and a mill-run of sorted ore from the vein proper showing some gold and fifty ounces silver per ton; and the Little Nell and Zephyr, situated on the top of Loveland Mountain, five miles from Alma, Mosquito district; located in July, 1879; vein a contact with lime and porphyry walls, and thirty inches thick, containing quartz carrying manganese of iron, galena, and sulphurets, in a lime-rock gangue, milling, when sorted, sixty ounces silver per ton; developments—two shafts thirty-eight and thirty-one feet deep, one fifteen-foot drift, and four open cuts aggregating sixty-five feet.

**Golconda Group.**—Comprising the Golconda, Shamrock, Oro Fina, Jupiter, Mars, and Venus; F. Weiner and P. H. Barron, both Alma, owners; claims 1500x300 feet each; situated on Mt. Bross, Montgomery district, four miles from Alma; located in 1874; vein a contact twelve feet thick, pay streak from twenty to thirty-six inches, containing galena, yellow copper, and some sulphurets, similar to the Moose ore, in a lime-rock gangue, milling, when sorted, from 25 to 250 ounces silver per ton; developments—seven open cuts from ten to forty feet in length and one seventy-five-foot tunnel; improvements—ore-house, cabin, and blacksmith-shop.

**Gold Star.**—W. E. Traver, Alma, Richard J. George, J. H. Mathias, and P. Puder, all Montgomery, owners; claim 1500x300 feet; situated at the head of the Platte River between Lincoln and Democrat Mountains, eight miles from Alma; located in 1878; vein a fissure 170 feet wide, pay streak from one and one-half to ten inches, containing gold and silver bearing quartz, assaying $22 to $100 per ton; developed by five shafts from ten to sixty feet in depth; output seventy-five tons of ore.



**Gold Vault.**—Owned by J. A. Pierce, J. G. Brooks, and W. H. Young, all Alma, and Frank C. Caley, Denver; claim 1200x300 feet; situated on the north-east slope of Mt. Lincoln, Montgomery district, four miles from Alma; vein a fissure three feet in width, containing iron pyrites, assaying $40 in gold per ton, in a lime-rock gangue; developed by an open cut sixty feet in length and a tunnel sixty feet long.

**Golden Gate, Mary Adair, Hoosier, and Shelby.**—A. H. Johnson and H. J. Stephens, both Alma, owners; claims 1500x300 feet each; situated on Buckskin Mountain, Mosquito district, three and one-half miles from Alma; located in 1879 and 1880; vein a contact from one to four feet in width, pay streak twelve inches, containing galena and copper pyrites in a lime-rock gangue, milling, when sorted, sixty per cent lead, from fifteen to twenty-eight ounces silver, and one-fourth ounce gold per ton; Mary Adair developed by three tunnels, thirty, eighty, and ninety feet in length, and the others by tunnels from ten to thirty feet in length; output eighty tons.

**Golden Queen Group.**—Comprising the Golden Queen, Bluebird, and Mayflower lodes; T. J. Wood, G. W. Snell, and Louis Adrian, all Alma, owners; claims 1500x300 feet each; situated on Mt. Bross, Buckskin district, three and one-half miles from Alma; located in 1880 and 1881; vein a contact, six feet wide, containing sulphurets, oxides, and galena, in a lime-rock gangue, milling, when sorted, twenty-two ounces silver per ton; developed by eight open cuts from ten to forty-five feet in length.

**Grand Bank.**—(See Horseshoe and Sheep Mountain Mining Company.)

**Grand Prize and Little Minnie.**—Samuel Cohen & Co., Fairplay, owners; claims 1500x300 feet each; situated in the Sacramento district, near Fairplay; located in 1878; vein a fissure three feet wide, pay streak twelve inches, containing galena, assaying thirty ounces silver per ton, in a lime-rock gangue; developed by a shaft 110 feet in depth and a tunnel thirty feet long.

**Great Eastern Group.**—(See Hall's Gulch Consolidated M. and T. Co.)

**Great West Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, M. M. Pomeroy; secretary, Geo. W. Potter; treasurer, A. S. Whitaker—all Denver; general manager, A. W. Kellogg, Alma; offices 433 Larimee street, Denver, and Alma; owns the following claims: Adrian, Dominion, Gregory, Gilbert, and Terry, all in process of patent, and the Block, Allen, and Eastern, altogether covering over seventy acres; situated on the east slope of Mt. Bross, three miles from Alma, Buckskin and Montgomery districts; veins horizontal contacts (there are two), in a lime formation, twenty-five and twenty feet thick, containing pockets of galena and sulphurets, carrying both gold and silver (principally the former), scattered through the entire vein-matter, milling, when sorted, from $40 to $100 per ton, between which veins is a quartzite formation, containing numerous vertical and flat veins; developments—six shafts from 10 to 125 feet in depth, and aggregating 500 feet, and four tunnels from 30 to 160 feet in length; improvements—shaft-houses, ore-houses, boarding and bunk house, etc.; output $80,000; and owns a placer claim of 100 acres, adjoining the above described property.

**Greenhorn and Buster.**—H. B. Grose, William and Thomas Grose, and J. W. Evans, all Alma, owners; claims 1500x300 feet each; situated on Mt. Bross, Montgomery district, four miles from Alma; located in

1879; vein a contact, two feet wide, pay streak from six to nine inches, containing galena and yellow copper, assaying from twenty to ninety-four ounces silver per ton, in a lime-rock gangue; developed by three drifts forty feet long each.

**Grose and Treweek Placers.**—W. H. Grose and W. H. Treeweek, both Alma, owners; claims cover thirty acres; situated on Buckskin Creek, at Alma, Columbia district; located in 1868; developed by 500 yards of ditches and some other workings.

**Ground-hog Group.**—Comprising seven claims, 1500x300 feet each; Mrs. Sophie Hoffman, George, William, and August Hoffman, all Dudley, owners; claims situated on Mount Bross, Montgomery district, five miles from Alma; located from 1879 to 1882; veins probably fissures, about two feet wide, pay streaks two inches, containing galena and gray copper, assaying from thirty to fifty ounces silver per ton, in a lime-rock gangue; developed by three tunnels, twenty-three, twenty-seven, and thirty-seven feet in length, and three open cuts, twenty, thirty-seven, and forty feet in length.

**Hall and Brunk Silver Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1877; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president and manager, Geo. W. Brunk; secretary, John W. Brownlow—both Alma; vice-president, Assyria Hall, Denver; office Alma; owns eighteen claims, covering about 150 acres, viz.: Dolly Varden, Hiawatha, Compromise, Juniata, Tunnel No. 1, Tunnel No. 2, Polaris, Iron Dyke, Friday, October, Joe Thatcher, Milwaukee, Triangle, Boundary, Bog Silver, Dump, Cliff; situated on the south-east slope of Mount Bross, four miles from Alma, Montgomery district; located from 1872 to 1878—all patented; veins all contacts, with lime and porphyry walls from twenty to forty inches in width, containing galena, sulphurets, and antimonial silver, in a lime porphyry gangue, milling, when sorted, from 50 to 200 ounces silver per ton, the Dolly Varden averaging about 125 ounces, and the Hiawatha about 100 ounces; developments—three cross-cut tunnels, 140, 325, and 500 feet long, respectively, and designed for the development of a large portion of the property, from which run 400 feet of drifts, adits, upraises, and winzes, with ten other tunnels from thirty to seventy-five feet in length, three shafts, 23, 40, and 100 feet deep, and some others from fifteen to twenty feet in depth, three tunnels on the Joe Thatcher from 60 to 100 feet in length, and on the Milwaukee one seventy-foot tunnel, with a fifty-foot winze, and two side-drifts; improvements—boarding and lodging house, ore-houses, tracks in the tunnels, equipped with cars; aggregate output 15,000 tons, daily shipments five tons, besides, probably, 20,000 tons of low-grade ore on the dumps.

And the McIntyre placer, 160 acres; situated on the Platte River, one and one-half miles from Alma; located in 1876, and patented in 1878; developments—250 feet of fluming, with a number of buildings.

**Hall's Gulch Consolidated Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado, in August, 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, M. L. Cox; vice-president, treasurer, and manager, C. W. Dake; secretary, J. S. Way—all Denver; office 271 Seventeenth street, Denver; owns a three-fourths interest in the Great Eastern Group, five claims, 300x1500 feet each, viz.: Great Eastern, Anglo-Saxon, International, and Picket Guard, all lying parallel, and the Kalamazoo, crossing them; situated in Hall's Gulch, nine miles from Webster, Hall's Valley district; veins all fissures; in the Great Eastern, a sixteen inch pay streak, containing gray and yellow copper, oxides of copper, and some quartz, milling, when sorted, seventy-five ounces silver per ton; developments—two shafts 90 and 135 feet deep and two drifts 110 feet long each, the first connecting with the two shafts at a depth of ninety



feet and the second 115 feet from the surface; in the Kalamazoo a vein of great but not definitely known width, with a pay streak from fifteen to thirty inches, containing quartz, gray and yellow copper, and bismuth silver, milling, when sorted, eighty ounces silver per ton; developed by the 135-foot shaft on the Great Eastern where the two veins intersect each other, and one 250-foot cross-cut, cutting the vein, along which it is designed to run and cut all the other veins; on the other three claims the Company is doing assessment work; all show fairly; owns the Manhattan, adjoining Great Eastern Group; vein a fissure, with a pay streak from four to ten inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from $40 to $50 per ton; developed by one 500-foot tunnel, and three shafts, ten, thirty, and sixty-two feet deep, respectively, the latter showing twenty inches of quartz and galena, assaying thirty-five per cent lead and from thirty to seventy ounces silver per ton; owns the Cashier Extension; vein presumably the same width as the Cashier and possessing similar characteristics, and the Lena, crossing it, for the development of which a double-track tunnel is being driven, now in sixty feet and designed to cut the vein 750 feet in depth; both situated one-half mile further up the gulch from the first described property.

**Hancock.**—Owners M. A. Lawrence, Alma, and Miss Lou. Dittenhaven, Leadville; claim 1500x300 feet; located in September, 1880; situated on the north-west slope of Pennsylvania Mountain, Mosquito district, six miles from Alma; vein a vertical fissure, in a quartzite formation, four feet wide, containing copper and iron stained quartz, which carries silver, assaying from twenty to thirty ounces silver per ton; developed by two tunnels thirty-five and ten feet long.

**Hannibal Group.**—Comprising Hannibal, Colonel Curry, and Golden Ledge; A. P. Curry, Leadville, and George R. Gynn and A. P. Clark, both Alma, owners; claims 1500x300 feet each; situated on Mount Lincoln, Montgomery district, six miles from Alma; veins all fissures about six feet wide, pay streaks from six to twenty-four inches, containing gold-bearing quartz and yellow copper, assaying six ounces gold and forty-five ounces silver per ton; Hannibal developed by a drift 120 feet in length; Colonel Curry by a drift sixty-two feet long and a shaft eighteen feet in depth; Golden Ledge by a tunnel forty feet in length.

**Hardenburg Consolidation.**—(See New England and Colorado Mining Company.)

**Hard to Beat.**—(See London Mining Company.)

**Hart.**—O. C. and J. W. Richardson, Blandenburg, Ky., owners; agent W. J. Mullen, Alma; claim 1500x300 feet; situated in Buckskin Gulch, Buckskin district; located in 1880; vein a gash three feet wide, containing galena in a lime-rock gangue, milling, when sorted, thirty-two per cent lead, seventeen ounces silver, and one-fourth ounce gold per ton; developed by a tunnel 181 feet long and two shafts fifteen and forty feet in depth.

**Hawkeye.**—David Hawkins, Jacob Redpath, and H. B. Roberts, all Alma, owners; claim 1500x300 feet; situated on Mount Bross, Montgomery district, five miles from Alma; located in 1881; vein probably a fissure, five inches wide, containing gold and silver bearing quartz, assaying two and one-half ounces gold and fifty ounces silver per ton; developed by a tunnel of considerable length.

**Head Lite.**—J. W. Strong, Dodge City, Kas., and Jos. Stubbs, Colorado Springs, owners; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, eight miles from Alma; located in August, 1881; vein a fissure

from two to six feet in width, pay streak from two to ten inches, containing gold and silver bearing quartz and some galena, assaying from $20 to $50 per ton; developed by a fourteen-foot adit with a ten-foot face.

**Hickey.**—Geo. R. Gynn, Alma, and Thos. O'Leary and Henry Flavin, both Denver, owners; claim 1500x300 feet; situated on Buckskin Mountain, Buckskin district, three miles from Alma; located in 1879; containing contact veins, with pay streaks twelve and eighteen inches wide, and one fissure four feet wide, all containing oxide of iron and yellow copper in a lime-rock gangue, milling, when sorted, from six to twenty ounces silver and one-fourth ounce gold per ton; developed by three drifts on the vein, sixty-two, seventy-four, and ninety-seven feet in length, an open cut thirty-six feet in length, and a twenty-six-foot drift.

**High Twelve.**—275x1500 feet; situated on the Mosquito Range, one mile from the terminus of the London Branch of the South Park Railway, Mosquito district; located in March, 1881; owners S. P. Gutshall and W. E. Moses, both Leadville; vein a fissure five feet wide, containing streaks of free-milling gold and silver quartz, milling from $15 to $50 per ton; developed by one shaft thirty feet deep.

**Hillboin Placer.**—S. S. Culbertson, Alma, and L. D. Coe, Leadville, owners; claim covers eighty acres; situated at the head of the Platte River, Montgomery district, nine miles from Alma; located in 1879; the developments consisting of some surface-workings.

**Hock-Hocking.**—150x1500 feet; situated on Pennsylvania Mountain, between Pennsylvania and Mosquito Gulches, 1,000 feet below the timber line, four miles from Alma, Mosquito district; located in July, 1879, and patented in May, 1882; owners J. T. Hillyer and Almanzo Robinson, both Waupun, Wis., and F. D. Howe, Alma; in this claim there are five veins, the first a contact, with lime and quartzite walls, dipping fifteen degrees, and twelve inches in thickness, containing pockets of sulphuret ore, milling, when sorted, ninety ounces silver per ton; the second a vertical vein, five feet wide, containing galena in a lime gangue, milling, when sorted, forty-five per cent lead and forty-five ounces silver per ton, and sand carbonates, milling thirty-six ounces silver; the third a horizontal vein, imbedded in limestone, from twelve to forty inches thick, containing lime carrying silver, milling thirty-five ounces silver per ton; the fourth a horizontal contact, with lime and porphyry walls three feet thick, containing spar carrying silver, assaying fifty-five ounces silver per ton; the fifth a fissure, similar to the Weston, containing gold-bearing quartz, milling $50 per ton; developments—six shafts aggregating 390 feet, 273 feet of levels and drifts, and one thirty-foot open cut; improvements—shaft-house, boarding and bunk house; output 200 tons.

**Hoffman Group.**—Comprising nine full claims, 1500x300 feet each; Mrs. Sophie Hoffman, Dudley, owner; claims situated on Mt. Bross, Buckskin district, one-half mile from Alma; located in 1880; veins all fissures, averaging two feet in width, containing galena, assaying ten ounces silver per ton, in a lime-rock gangue; developed by four tunnels from twenty to forty-five feet in length and five shafts from ten to twenty-seven feet in depth; adjoining which are sixteen acres of placer ground, owned by the same party.

**Hoil Group.**—Comprising the Hoil, Elie, Kankakee, and Ketsby; W. J. Curtice and A. H. Estes, both Denver, owners; manager, J. A. Pierce, Alma; claims 1500x300 feet each; situated on the east slope of Mt. Lincoln, Montgomery district, four miles from Alma; located in February, 1882; in the Hoil, Elie, and Kankakee, veins all contacts, from one to four feet wide, containing galena in a lime-rock gangue, milling, when sorted, from 50 to 250 ounces silver per ton; and in the Ketsby, a fissure, with a pay streak eight inches wide, containing gold and silver bearing quartz, with some copper, milling, when sorted, seven per cent copper, four ounces gold, and twenty-five ounces silver per ton; developed by 500 feet of tunnels and shafts; output $10,000.



**Holman.**—(See Nancy, Tioga, and Holman.)

**Hoosier.**—(See Golden Gate and Hoosier.)

**Horseshoe and Sheep Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $1,000,000, in 100,000 shares of $10 each; president and treasurer, Nathan Cohn; vice-president, Joseph Cohn; secretary, N. Rollins; superintendent, C. C. Hopple—all Leadville; office 303 Harrison Avenue, Leadville; owns the Grand Bank, Marysville, Newport, Alice Smith, Consolidated, and Cohn lodes, 1500x300 feet each; situated in the Horseshoe district, six miles from Fairplay; located in 1880; veins all contacts from two to six feet wide, containing galena in a lime-rock gangue, carrying gold, milling, when sorted, one-half ounce gold and sixteen ounces silver per ton; developed by two tunnels 75 and 100 feet in length and three shafts, 30, 75, and 125 feet in depth, with some other workings.

**Hunkidori Group.**—Comprising the Hunkidori, Phæton, and Blue Badger lodes; G. W. Snell, Alma, owner; claims 1500x300 feet each; situated on Mt. Bross, Buckskin district, three miles from Alma; located in 1879 and 1880; veins probably fissures, about three and one-half feet wide, seamed with galena and iron and copper pyrites, assaying from 20 to 900 ounces silver per ton, in a lime-rock gangue; developed by three tunnels, ten, fifteen, and fifty feet in length.

**Iamia.**—(See Keystone and Iamia.)

**Illinois.**—J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; claim 1350x300 feet; situated on North Star Mountain, one-fourth mile from Montgomery, Montgomery district; located in 1881; vein a fissure two feet wide, containing gold and silver bearing quartz and iron pyrites, assaying $45 per ton; developed by four open cuts from ten to fifteen feet in length.

**Imperial Group.**—Five claims, 300x1500 feet each, viz.: Brown, Alice, and Little Nell; situated in the basin of Mosquito Gulch, one-half mile from Park City, Mosquito district; located in 1879; veins all fissures from four to eight feet wide, pay streaks from twelve to twenty-four inches, containing blue iron, copper, galena, and sulphurets, in a quartz gangue, milling, when sorted, from $30 to $100 per ton in silver and gold; and the Orphan Boy Extension and Union; situated on the south slope of Mosquito Mountain, three-fourths mile from Park City, same district; located in 1880 and 1879, respectively; veins both fissures eight feet wide, pay streaks from fifteen to thirty inches, containing galena and copper in a quartz gangue, milling, when sorted, from $50 to $65 per ton; developments—nine shafts from ten to fifty feet in depth and four tunnels from fifteen to thirty-five feet in length; output ten tons; owners B. F. Hasness and M. McVey, both Park City.

**Imperial Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; president, H. D. Mackay; secretary and treasurer, James C. Shearman—both New York City; general manager, W. F. Kendrick, Denver; offices 115 Broadway, New York City, and Room 12 Tabor Block, Denver; owns sixteen claims, 1500x300 feet each, viz.: Good Samaritan, Northern Light, Little Fritz, and Buckeye State; situated on the west slope of Loveland

Mountain, Buckskin district, two miles from Alma; veins all contacts, nearly horizontal, and from two to ten feet wide, containing lead and copper carbonates, manganese, and hematite iron, in a lime-rock gangue, milling, when sorted, from 20 to 100 ounces silver per ton; developed by four tunnels, from 20 to 100 feet in length, one eighty-foot shaft, and one twenty-foot open cut; and the Crescent, Zulu Chief, Howe, Perry Smith, Springer, and Stone; situated on the north-west slope of Mt. Bross, one and one-half miles from Alma, Buckskin district; veins all nearly horizontal contacts, from six to sixty inches thick, containing gold-bearing quartz, galena, and iron and copper pyrites, in a lime-rock gangue, milling, when sorted, from 50 to 100 ounces silver per ton; developments—two fifty-foot tunnels and six ten-foot shafts; the Randolph Group, four claims, 1500x300 feet each; situated in Buckskin Gulch, five miles from Alma, Buckskin district; veins all contacts, four feet wide, containing egg-shaped pockets of galena and iron pyrites, assaying from 10 to 200 ounces silver per ton, scattered through the lime formation; developments—a tunnel forty feet in length and four shafts ten feet deep each; and the Spray (extension of Kansas), situated in Montgomery Gulch, nine miles from Alma; vein a fissure, four feet wide, containing gold-bearing quartz (stamp-rock), yielding fairly, and iron pyrites (smelting-ore), milling, when sorted, from $10 to $80 per ton; developed by one forty-foot tunnel.

**Independence.**—Harvey P. Harper and R. H. Wiggin, both Taylor City, and Lyman S. Aldrich and John Black, both Leadville, owners; claim 1500x300 feet; situated on Buckskin Mountain, Mosquito district, three miles from Alma; located in 1879; vein probably a fissure, four feet wide, containing gold-bearing quartz and galena, assaying fifty per cent lead, a trace of gold, and forty-seven ounces silver per ton; developed by one fifty-foot shaft and thirty feet of drifts.

**Iowa Gold and Silver Mining Company (The).**—Incorporated under the laws of Iowa; manager, W. S. Shoemaker, Fairplay; owns the North Star and another claim adjoining it, 300x1500 feet each; situated at the head of Mosquito Gulch, about six miles from Park City, Mosquito district; vein probably a fissure, four feet in width, containing decomposed quartz, assaying from 20 to 100 ounces silver per ton and more or less gold, and showing deposits in the lime-rock adjoining the vein; developments—two tunnels ten and fifty feet long, with a chamber at the end of the latter, and a twenty-foot shaft therefrom.

**Iron.**—(See Glasgow Silver Mining Company.)

**Iron Monitor.**—Samuel Marsh, W. P. Steele, J. R. Weldon, and A. J. Stevenson, all Fairplay, owners; claim 1500x300 feet; situated on the Park Range, twelve miles from Fairplay, Horseshoe district; located in 1881; vein a contact four feet wide, pay streak from six to eighteen inches, containing galena, assaying forty-seven ounces silver per ton, in a lime-rock gangue; developed by twenty-two feet of shafts.

**Iron No. 2.**—Owners W. J. Mullen, Alma, and C. F. Chandler, St. Louis, Mo.; claim 1500x300 feet; situated on the west slope of Mt. Bross, adjoining the Colorado Springs Group, Buckskin district, five miles from Alma; located in July, 1879; vein a horizontal contact, with lime walls from five to six feet in thickness, containing hematite iron, iron pyrites, oxide of iron, and yellow copper, in a lime gangue, assaying one-half ounce gold and seventeen ounces silver per ton; developed by a tunnel twenty-seven feet long.

**J. B. Grant Silver Mining Company (The).**—Incorporated under the laws of Colorado, October 1, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, James B. Grant, Denver;



vice-president, E. C. Babcock, Leadville; second vice-president, F. J. Sherman, Chicago; secretary, J. W. Virgin; treasurer, John S. Clark, Jr.—both Leadville; office 224 Harrison Avenue, Leadville; owns the following lodes, viz.: Detroit City, Highland Mary, Badger, Adeline, King-of-the-Way, Old Abe, and Chief, 1500x300 feet each; situated on the Buckskin Gulch slope of Mt. Bross, Buckskin district; located in 1879; veins probably fissures, from three to four feet in width, pay streaks from ten to thirty inches, containing galena and gold-bearing quartz, assaying from $50 to $300 per ton; developed by five tunnels from 35 to 150 feet in length and some other workings.

**J. G. Blaine.**—Miles McDonald and James Moynahan, both Alma, owners; claim 1500x300 feet; situated on the west slope of Buckskin Mountain, Buckskin district, three miles from Alma; located in 1878, and patented in 1881; vein a fissure eight feet wide, pay streak thirty inches, containing galena and yellow copper in a lime-rock gangue, milling, when sorted, ten per cent lead and 100 ounces silver per ton; developed by two tunnels 120 and 200 feet in length, respectively, with some other workings; improvements—shaft-house, ore-house, etc; output 700 tons.

**Jesse.**—J. B. Puckett, Wm. H. M. Hoback, and Poter Gaskill, all Alma, and John Romer, Dudley, owners; claim 1500x300 feet; situated on Mt. Bross, Montgomery district, three miles from Alma; located in 1880; vein a horizontal contact five feet thick, seamed with galena scattered through the lime-rock formation, assaying twenty ounces silver per ton; developed by one tunnel thirty-four feet long.

**K. P.**—(See U. P. and K. P.)

**Kansas City Mining Company (The).**—Incorporated under the laws of West Virginia, in February, 1882; capital stock $250,000, in 50,000 shares of $5 each, non-assessable; president, Daniel U. Chamberlin; secretary and treasurer, Geo. A. Allison—both Boston, Mass.; superintendent, C. L. Lightburn, Alma; offices No. 3 Commercial street, Boston, Mass., and Alma, Colo.; owns the Kansas City, Nos. 1 and 2, lodes, 1500x300 feet each; situated on Democrat Mountain, Buckskin district, five miles from Alma; located in August, 1880, and patented October, 1881; veins both fissures, three to seven feet wide, respectively, pay streak from four to thirty-six inches, containing galena and sulphurets in a lime-rock gangue, milling, when sorted, from five to twenty-five per cent lead and from 50 to 500 ounces silver per ton; No. 1 developed by two tunnels 150 feet long each, connected by seventy-five-foot winze, one shaft 100 feet deep from the lower tunnel, and seventy-five feet of drifting; and on No. 2 a twenty-foot tunnel; improvements—two ore-houses, boarding-house, etc.; output 200 tons.

**Kansas Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, R. S. Stevens, Attica, N. Y.; vice-president, C. O. Godfrey, St. Louis, Mo.; secretary, Geo. H. Shields, St. Louis, Mo.; treasurer, A. D. Jaynes, Sedalia, Mo.; offices Room 12 Singer Building, St. Louis, and Alma; owns the following claims: Kansas, Morrison, Morrison Extension, Godfrey, and Stevens lodes, 1500x300 feet each; situated on Loveland Mountain, Mosquito district, four miles from Alma; located from 1876 to 1882; veins all contacts, or a lime formation, from fifty to seventy feet thick, overlying the quartzite underneath, containing three distinct mineral veins from four to ten inches thick, composed of galena with chlorides and bromides in a lime-rock gangue, the first-class ore milling, when sorted, 250 ounces silver, the second-class 100 ounces, and the third-class fifty ounces per ton; developed by 275 feet of tunnels, with some drifts, shafts, etc.

**Kansas Mining Company (The).**—Owns one claim, viz., the Kansas, 300x1500 feet; situated on the south slope of North Star Mountain, six miles from Alma, Montgomery district; located in January, 1875, and patented; and two five-acre mill sites adjoining the mine; vein a fissure, four feet wide, pay streak eighteen inches, containing quartz carrying sulphides of silver and iron, milling, when sorted, $25 per ton in gold, besides a little silver; developments—four drifts from 80 to 250 feet in length, five shafts from 20 to 130 feet in depth, and a number of open cuts, proving up the vein; and owns a stamp-mill, erected on one of the mill sites, containing ten 750-pound Stamps, motive power supplied by water facilities; connected with the main working tunnel of the mine by a track equipped with the necessary cars.

**Kate Hayes.**—A. P. Clark, Wm. Barclay, and Geo. R. Wilcox, all Alma, Colo.; claim 1500x300 feet; situated on spur of Mt. Lincoln, Montgomery district, six miles from Alma; located in 1882; vein probably a fissure, five feet wide, containing gold quartz and galena, assaying one-half ounce gold and five ounces silver per ton; developed by a drift on the vein sixteen feet in length.

**Keystone and Iamia.**—A. H. Johnson and F. D. Howe, both Alma, and John A. Willard, Mankato, Minn., owners; claims 1500x300 feet each; situated on Mount Bross, Buckskin district, two and one-half miles from Alma; located in 1879, and in process of patent; vein a contact from five to six feet thick, containing sulphides in a lime-rock gangue, yielding fairly; developed by two shafts seventy feet deep each.

**King William.**—Lent Hall, James Moynahan, and David Hawkins, all Alma, owners; claim 1500x300 feet; situated on Mount Bross, Montgomery district, three and one-half miles from Alma; located in September, 1880; vein a contact varying in thickness, and containing iron and copper pyrites, assaying eighty ounces silver per ton; developed by a tunnel forty-nine feet in length.

**King Solomon.**—F. Weiner, A. Rittmaster, Louis Lieberman, and Louis Berkson, all Alma, owners; claim 1500x300 feet; situated on Buckskin Mountain, Buckskin district, three and one-half miles from Alma; located in 1879; vein a contact from two to four feet wide, containing galena, assaying sixteen ounces silver per ton, in a lime-rock gangue; developed by a tunnel forty-five feet in length and a shaft eighteen feet in depth.

**Lake Shore.**—George Kline, P. Heiberger, and A. L. Gilbert, all Fairplay, owners; claim 900x300 feet; situated on Cameron Mountain, six miles from Alma; located in 1880; vein a fissure three feet wide, pay streak six inches, containing gold and silver quartz, assaying eight and one-tenth ounces gold and twenty-two ounces silver per ton; developed by a shaft twenty-five feet in depth.

**Lakete.**—300x1500 feet; situated on the south slope of Hand-cart Mountain, ten miles from Webster, Hall Valley district; located in 1882; owner the Bullion Prince Mining Company (see Summit County); vein a fissure eighteen inches wide, containing quartz and galena; developed by one thirty-five-foot open cut and one ten-foot shaft.

**Lancaster Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non assessable; president, F. G. Richardson; secretary and treasurer, Thomas George—both Leadville; superintendent, David Rock, Park City; office Rooms 10, 11, and 12, Chicago Block, Leadville; owns three claims, viz.: Badger, Troy, and Trojan lodes, covering twenty-five acres; situated in Mosquito district, one mile from London mine; located from 1876 to 1879; vein a fissure from two to eight feet wide, containing quartz, galena, and iron pyrites, assaying fairly, both in gold and silver; developed by a tunnel 100 feet in length and some other workings.



**Last Chance Group.**—Samuel Cohen and Samuel McMillen, both Fairplay, owners; group consists of two claims, 1500x300 feet each; situated in Horseshoe district, thirteen miles from Fairplay; vein a contact about six feet wide, pay streak from eight to thirty inches, containing galena in a lime-rock gangue, milling, when sorted, thirty ounces silver per ton; developed by sixty-six feet of shafts and a 300-foot open cut; output 100 tons.

**Last Chance.**—Francis C. Lawrence and O. K. King, both New York City, owners; Geo. W. Brunk, Alma, manager; claim 1500x300 feet; situated on Mt. Bross, three miles from Alma, Montgomery district; located in 1877; vein a contact three feet wide, seamed with iron oxides, sulphurets, and galena, in a lime-rock gangue, milling, when sorted, from forty to sixty ounces silver per ton; developed by a shaft forty feet in depth and a level forty feet in length.

**Last Chance.**—T. E. Clery, Montezuma, and James Cline and Napoleon Berry, both Hall Valley, owners; claim 1500x150 feet; situated at the head of Hall's Gulch, Hall Valley district, five miles from Montezuma; located in 1879; vein a fissure, varying in width, and containing galena and gray copper, assaying fifty per cent lead and from 50 to 400 ounces silver per ton, in a quartz gangue; developed by three drifts on the vein, twelve, fifteen, and twenty-five feet in length.

**Lawlor Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president and general manager, P. J. Cunningham; secretary, C. W. Waite; treasurer, Geo. E. Taylor; superintendent, H. J. Mason—all Leadville; office 219 Harrison Avenue, Leadville; owns the following claims: Irene, White Mountain, Lehigh, Delaware, and Lackawanna, covering sixty acres, and the Tip-top placer, sixty acres; all situated in South Mosquito Gulch, Mosquito district; located in 1880, and in process of patent; veins all fissures from six inches to four feet in width, containing galena and free-milling gold quartz, assaying from $50 to $500 per ton in gold and silver; developed by six shafts from 25 to 100 feet in depth, with some other workings; improvements—steam machinery, ore-houses, etc.

**Leftwick.**—(See Comet Consolidated Mining Company.)

**Little.**—300x1500 feet; situated on the Buckskin Gulch slope of Mt. Bross, Buckskin Joe district; located in July, 1880; owner Archie McDonald, Jr., Alma; vein probably a fissure, with granite walls, pay streak ten inches, containing galena and sulphurets, assaying from $75 to $150 per ton, in a quartz gangue; developments—one seventy-five-foot tunnel and a discovery shaft.

**Little Annie Consolidated Mining Company.**—President, E. H. Ogden, New York City; owns two claims, viz.: the Little Annie and Eliza; situated on Mt. Lincoln, Montgomery district, five and one-half miles from Alma; veins both contacts, varying in width, and containing galena, assaying from 60 to 120 ounces silver per ton, in a lime-rock gangue; developed by two drifts twenty and twenty-five feet in length.

**Little Denver.**—T. E. Clery, Montezuma, and Napoleon Berry and James Cline, both Hall Valley, owners; claim 1500x150 feet; situated at the head of Hall's Gulch, Hall Valley district; located in 1879, and in process of

patent; vein a fissure seven feet in width, pay streak from eight to twenty inches, containing galena and gray copper, assaying twenty-five per cent copper and from 50 to 500 ounces silver per ton; developed by a tunnel 145 feet in length and a shaft twelve feet in depth.

**Little Ernest.**—B. F. Joslin, Alma, owner; claim 1500x300 feet; situated on Loveland Mountain, Buckskin district, two miles from Alma; located in 1881; vein a fissure three feet wide, containing gold and silver bearing quartz (free-milling) and oxide of iron (smelting), yielding, when sorted, an average of $60 per ton; developed by two tunnels 26 and 120 feet in length and one twenty-six-foot shaft.

**Little Esther.**—F. Weiner and George R. Gynn, both Alma, owners; claim 1500x300 feet; situated in Buckskin Gulch, Buckskin district, one and one-fourth miles from Alma; located in 1880; vein probably a fissure, four feet wide, containing iron and galena in a lime-rock gangue, milling, when sorted, $50 per ton in gold and silver; developed by four shafts, fourteen, twenty-nine, forty, and seventy-five feet in depth, and two open cuts fifteen and thirty-five feet in length.

**Little Mike.**—F. F. Mullen and A. K. Fuller, both Alma, owners; claim 1500x300 feet; situated on Mt. Bross, Montgomery district, four miles from Alma; located in 1880; vein a contact six feet wide, pay streak eight inches, containing galena and yellow copper in a lime-rock gangue, milling, when sorted, $112 per ton; developed by four tunnels forty feet long each.

**Little Minnie.**—(See Grand Prize and Little Minnie.)

**Little Minnie.**—L. A. Plummer, Lewis Nelson, and Lewis Johnson, all Horseshoe, and R. C. Schreider, Milwaukee, Wis., owners; claim 1500x300 feet; situated in Horseshoe Gulch, Horseshoe district, twelve miles from Fairplay; located in 1879; vein a fissure four feet wide, pay streak from three to six inches, containing galena and iron pyrites, with some sulphurets, assaying $2 in gold and sixty ounces silver per ton, in a lime-rock gangue; developed by two shafts eighteen and forty-five feet in depth.

**Little Nell Group.**—Consisting of Little Nell, Sitting Bull, and Dolly Varden lodes; F. J. Smith and A. B. Crook, both Fairplay, owners; claims 1500x150 feet each; situated in the Sacramento district, seven miles south of Fairplay; located in 1872; vein a contact from one to three feet wide, containing galena, assaying forty per cent lead and sixteen ounces silver per ton; developed by a shaft thirty-one feet in depth.

**Little Nellie Group.**—Three claims, covering twenty-five acres; Thomas T. Willey and Samuel Cohen, both Fairplay, owners; group situated on Sacramento Mountain, Sacramento district, six miles west of Fairplay; located in 1872; vein a contact from one to six feet wide, containing galena and gray copper in a porphyry gangue, milling, when sorted, thirty per cent lead and from 25 to 100 ounces silver per ton; developed by three shafts 100 feet deep each and fifty feet of drifting.

**Little Nettie.**—S. W. Ruark, David Murphy, and Austin Carter, all Montgomery, owners; claim 1500x300 feet each; situated on Pennsylvania Mountain, Mosquito district, three miles from Alma; located in 1880; vein probably a fissure, two and one-half feet wide, pay streak from eight to ten inches, containing galena, assaying from 50 to 100 ounces silver per ton, in a porphyry gangue; developed by a shaft 102 feet in depth.



**Little Rock and Baltic.**—Thomas W. Duffy, Alma, owner; claims 1500x300 feet each; situated on Mt. Bross, Buckskin district, three miles from Alma; located in 1881; veins both fissures, varying in width, pay streaks five inches, containing quartz carrying silver, assaying sixty-nine ounces silver per ton; developed by three open cuts ten feet long each, and a tunnel on the Little Rock thirty-five feet in length.

**Little Ross.**—Owners A. H. Johnson and H. J. Stephens, both Alma, Wm. A. Edwards, Des Moines, Ia., D. F. Lathman, Franklin Grove, Ill., W. J. Stephens, Dixon, Ill.; claim 1500x300 feet; situated on the Buckskin slope of Mt. Bross, Buckskin district, three and one-half miles from Alma; located in 1879, patented June, 1881; vein a contact, with lime and quartzite walls, dipping fifteen degrees, two feet thick, pay streak twelve inches, containing sulphurets, galena, native silver, and gray copper, in a lime quartzite gangue, milling, when sorted, from 25 to 100 ounces silver per ton; developed by two tunnels seventy feet long each, and two other tunnels thirty and eighty feet long; improvements—ore-house, bunk and boarding house; output twenty tons per month.

**Lizzie Bostel.**—J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, one mile from Montgomery; located in 1880; vein a fissure, seven feet wide, pay streak from twelve to eighteen inches, containing iron and copper pyrites, assaying one ounce gold and fifteen ounces silver per ton, in a quartz gangue; developed by one tunnel twenty feet long.

**Lizzie and Alone.**—W. E. Traver, Alma, Richard J. George and W. J. McNamara, both Montgomery, owners; claims 1500x300 feet; situated on North Star Mountain, Montgomery district, eight miles from Alma; located in 1880; vein a fissure, six feet wide, pay streak three feet, containing gold-bearing quartz (stamp-rock), yielding fairly, and galena (smelting-ore), milling, when sorted, forty-three ounces silver per ton; developed by one shaft forty feet in depth and two drifts fifteen feet long each; output thirty tons.

**Locker.**—A. K. Anderson and James O'Neil, both Leadville, owners; claim 1500x300 feet; situated in Four Mile Gulch, Horseshoe district, nine miles from Fairplay; located in 1880; vein a fissure two feet wide, pay streak from six to twelve inches, containing galena and gray copper, assaying twenty per cent copper and 100 ounces silver per ton, in a porphyry and lime gangue; developed by two tunnels twenty and sixty-two feet in length.

**London Mining Company (The).**—Incorporated under the laws of New York; president, George R. Blanchard; secretary, H. S. Comstock—both New York City; general manager, Jno. T. Herrick, Fairplay; offices New York City and at Fairplay; owns the London and Hard-to-Beat, two patented and adjoining claims on the same vein, 300x1500 feet each; situated on the north slope of London Mountain and on the north fork of Mosquito Gulch, seven miles from Alma, Mosquito district; vein a fissure, or, more properly speaking, a fault in the formation, the last being lime on the top of the mountain, with alternating layers of quartzite and lime to the depth of at least 200 feet, after which layers of granite occasionally intervene between the lime and the quartzite, the same having been thrown out of a horizontal position and having a greater or less dip by reason of the "fault," the vein varying in width from thirty to sixty feet, the mineral-bearing veins being on each wall, running parallel from twenty to fifty feet apart, and varying in width from one to six feet, the intervening space between these ore zones containing greater or less mineral streaks, the general direction of which is the same as that of the vein; ore—gold-bearing quartz, with galena and iron and copper pyrites in a porphyry gangue, sometimes very rich, and milling, when

sorted, an average of $35 per ton, the contacts of the lime, quartzite, and granite stratification sometimes containing mineral bodies similar to that of the main vein; developments—two tunnels on the vein 100 and 500 feet long, respectively, and one cross-cut, viz., the Blanchard, run on a tunnel site of that name, owned by the Company, 700 feet long, cutting the vein at a depth of 200 feet, on which there is 1,300 feet of drifting, with tracks laid therein, the same being connected with tunnel above by a 250-foot winze and incline, or about 4,500 feet of tunnels, drifts, and winzes, all in ore except the Blanchard tunnel and a few unimportant cross-cuts, and a large amount of stoping, showing enormous ore-reserves, there being over one-half mile of ore veins opened up; improvements—steam machinery, ore-houses, boarding and bunk houses, office, etc., 7,500 feet of ventilating pipes, and a wire tram-way 4,500 feet in length, connecting the mine with the London, South Park & Leadville R. R., a line six miles in length, built expressly for the transportation of ore from the London mine to the Company's mill, six miles away, at London Junction, containing twenty Stamps and other machinery, with the necessary motive power; output of mines 100 tons per day; and owns the Jerome B. Chaffee, Grimsley, and Comstock, three adjoining claims on the same vein, and altogether 3,900 feet long and 300 feet wide; situated on the north side of the north fork of Mosquito Creek, and on Buckskin Mountain, seven miles from Alma, same district; patented in 1882; vein a fissure, in a schist formation, overlaid by lime four feet wide, containing low grade gold-quartz ore, with iron pyrites and some galena; developments—200 feet of tunnels and shafts.

**Lone Star Consolidated Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; owns one claim, viz., Lone Star, 1500x300 feet; situated in Mosquito Gulch, Mosquito district, eight miles from Alma; vein a fissure from three to four feet wide, pay streak from ten to fifteen inches, containing pockets of black sulphurets in a porphyry and lime gangue, milling, when sorted, from $25 to $250 per ton; developed by one shaft 218 feet in depth and 400 feet of levels, with other workings.

**Long John.**—300x1500 feet; situated at the head of Mosquito Gulch, six miles north of Park City, Mosquito district; located in September, 1881; owners J. J. Fisher, Durango, and Edward Mattice, Park City; vein a fissure five feet wide, pay streak sixteen inches, containing gold and silver bearing quartz with some galena, assaying $25 per ton; developed by one ten-foot shaft and one twenty-foot cross-cut.

**Louisa.**—Leonard and Joseph Summers, both Fairplay, owners; claim 1500x300 feet; situated in Little Sacramento district, six miles from Fairplay; located in 1878; vein probably a fissure, four and one-half feet wide, pay streak eighteen inches, containing galena and gray copper, assaying 135 ounces silver per ton, in a porphyry and lime gangue; developed by a shaft fifty-seven feet in depth.

**Louise.**—B. F. Stickley, Leadville, and others, owners; claim 1500x300 feet; situated on Loveland Mountain, Buckskin district, two and one-half miles from Park City; located in 1879; vein a fissure seven feet wide, pay streak three feet, containing galena, assaying from 40 to 120 ounces silver per ton, in a lime-rock gangue; developed by a shaft forty-five feet in depth and a tunnel forty feet in length.

**Lucky Queen.**—1500x300 feet; situated on the Mosquito Gulch slope of Pennsylvania Mountain, four miles from Alma, Mosquito district; owners H. J. Bagley, C. E. Newton, and D. Anderson, all Park City; vein a well defined vertical fissure, containing pockets of sulphurets, assaying from 40 to 200 ounces silver per ton; developments—two tunnels sixty-five and seventy-five feet long, respectively.



**Magnolia Group.**—Three claims, 1500x300 feet each; Lyman Fay, Alma, owner; group situated on North Star Mountain, Montgomery district, six miles from Alma; located from 1876 to 1881; veins all fissures, averaging four feet in width, pay streaks eighteen inches, containing copper and iron sulphides in a quartz gangue, milling, when sorted, $30 per ton in gold; developed by an open cut 100 feet in length, and two tunnels forty and eighty feet in length.

**Main.**—(See Mount Lincoln Consolidated Mining Company.)

**Manhattan.**—(See Hall's Gulch Consolidated Mining and Smelting Company.)

**Mary Adair.**—(See Golden Gate, Mary Adair, etc.)

**Mary Archer Group.**—Comprising the Mary Archer, Ostrich, Lion, and North Eagle lodes, 1500x300 feet each; J. F. Smith, A. S. D. Lamouth, and Wm. Mann, Fairplay and Park City, owners; situated on Sacramento Mountain, Horseshoe district, ten miles from Fairplay; vein a fissure, varying in width, and containing galena and carbonates, assaying seventy ounces silver per ton, in a lime gangue; developed by one tunnel forty feet in length and three twenty-foot open cuts.

**Melissa.**—(See Easton of Pennsylvania Silver Mining Company.)

**Minerva.**—200x1500 feet; situated in Sacramento Gulch, seven miles from Fairplay; located in 1874; vein a contact of the overlying lime with the porphyry underneath, and varying in width, containing lead carbonates and galena in a lime gangue, milling, when sorted, from 25 to 100 ounces silver per ton, the developments being considerable.

**Missouri Group.**—Owned by G. W. Young and others for whom he is trustee; office 183 Sixteenth street, Denver; group comprises the Missouri, Laclede, Silver Queen, and Bonanza lodes, 1500x300 feet each; situated in Hall's Gulch, nine miles from Webster, Hall Valley district, the Missouri and Laclede patented; veins all fissures in a granitic gneiss formation, in the Missouri thirty feet in width, pay streaks from six to thirty-six inches, containing bismuth, gray copper, malachite of copper, and copper pyrites, in a quartz gangue, milling, when sorted, an average of $100 per ton, after deducting smelting charges; developments—a tunnel on the vein 430 feet in length, and three shafts, seventeen, thirty, and forty-eight feet in depth; in the Laclede four feet in width, pay streak from six to eighteen inches, containing galena and gray and yellow copper, assaying fifteen per cent copper and 100 ounces silver per ton, in a quartz gangue; developed by a drift on the vein, 125 feet in length and the others less developed.

**Mohawk.**—Wm. Hill and Thomas Keating, both Alma, owners; claim 1500x300 feet; situated on Mt. Bross, Buckskin district, five miles from Alma; located in 1879, and in process of patent; vein a contact, or lime-rock deposit, about three feet thick, overlying the quartzite underneath, containing galena aud some sulphurets in a lime gangue, milling, when sorted, from 100 to 200 ounces silver per ton; developed by three shafts from ten to fifty feet in depth and seven ten-foot open cuts.

**McCrary and Nan Harris.**—W. T. McCrary and John Carman, both Montgomery, owners; claims 1500x300 feet each; situated on Mt. Lincoln, Montgomery district, one-fourth mile from Montgomery; located January 1, 1882; vein probably a fissure from five to twenty feet wide, pay

streak from ten to twenty-two inches, containing gold-bearing quartz (stamp-rock), yielding fairly, and iron pyrites and galena (smelting-ore), assaying $20 per ton; developed by two fifteen-foot tunnels, one on each claim.

**McLean Mining Company.**—(Unincorporated); composed of S. A. McLean, S. A. Van Deusen, and G. C. Greenwood; office Fairplay; owns a group of seven patented claims, constituting the Mud-sill mines; situated on the Horseshoe Gulch slope of Mud-sill Hill, six miles from Fairplay-Horseshoe district; located in 1880; veins all contacts, with gray and crystal, lized lime walls, from one to seven feet thick, the Mud-sill about seven feet, two-thirds of which contains a chloride and sulphuret ore, with gray copper, in a lime gangue, assaying from 75 to 100 ounces silver per ton; developments—one incline shaft 160 feet deep, one tunnel 200 feet long, and 300 feet of levels; owns a group of patented claims, covering over 900 acres; also situated in Horseshoe Gulch; covered with valuable timber, and developed by a number of shafts from 25 to 130 feet in depth, all showing a formation somewhat similar to that around Leadville, or heavy beds of porphyry overlying the limestone mineral stratum, some of the mineral seams found in the porphyry leading down to the limestone contact, assaying from five to twenty-five per cent lead and from ten to fifty ounces silver per ton.

**Monarch Group.**—Four claims, viz.: Monarch, Comstock, Berlin, and Paris lodes; J. A. Pierce and W. H. Young, both Alma, and A. L. Pogue, Richmond, Ind., owners; claims 1500x300 feet each; situated on the east slope of Mount Lincoln, Montgomery district, four miles from Alma; located in June, 1882; veins probably fissures, from one to seven feet wide, containing gold-bearing quartz, assaying from two to four ounces gold per ton; developed by six shafts twenty feet deep each and a thirty-foot open cut.

**Montgomery.**—(See Nestor Mining Company.)

**Montgomery Queen and Tippecanoe.**—Owners Seth W. Ruark, David Murphy, and Austin Carter, all Montgomery; claims 1500x300 feet each; situated on the Platte River slope of Mount Lincoln, Montgomery district, one-half mile from Montgomery; located in 1880; veins both fissures varying in width, pay streaks from nine to twelve inches, containing gold-bearing quartz and galena, assaying $10 in gold and forty ounces silver per ton; developed by two shafts thirty feet deep each and two tunnels ten feet long each.

**Montgomery Treasure.**—J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, one-half mile from Montgomery; located in 1881; vein a fissure seven feet wide, pay streak five inches, containing iron and copper pyrites, assaying one ounce gold and fifteen ounces silver per ton, in a quartz gangue; developed by a tunnel fifty feet in length.

**Moose Mining Company (The).**—Incorporated under the laws of Colorado, April 15, 1872; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; vice-president, Geo. B. Satterly; secretary and treasurer, H. S. Bradford—both New York City; manager Jno. M. Fritz, Alma; offices 57 Broadway, New York, and Alma, Colo.; owns twenty-two claims, covering about 165 acres, viz., Moose, Silver Star, Gill, Alps, Baker, Highland, Julia, Phillips, Emma, Addie, Belle Gill, Ocean Wave, Hoosier, Mary, and others; situated on the north-east slope of Mt. Bross, five miles from Alma, Montgomery district; located from 1872 to 1878, and all, with the exception of two, patented; vein a contact, or a lime formation overlying the quartzite underneath, and probably from 2 to 100 feet in thickness, containing pockets of segregated mineral (sulphurets of silver in a lime-rock gangue), milling, when sorted, from 50 to 400 ounces silver per ton, the shipments for the past two years averaging about five per cent lead and 125 ounces silver; developments—



about 10,000 feet of tunnels and drifts, with three shafts seventy-five feet in depth each, and considerable stoping, showing large ore-reserves; improvements—ore-houses, shaft-houses, bunk and lodging house; dividends paid, $600,000.

Owns a concentrating-works; situated at Dudley, and erected on 320 acres of ground belonging to the Company; building 130x60 feet, containing one Dodge Crusher, thirty-six-inch Cornish Rolls, Ball Pulverizing-mill, two Bruckner Roasters, one 15x30 Brick Roaster, 150-horse-power engine with return-flue boilers, and one No. 3 Blake Pump, Frieburg Tubs, and other machinery and belting, ore-houses, office, dwelling-house, etc.

**Mt. Bross Mining Company.**—Incorporated under the laws of New York, in 1881; president, Geo. R. Blanchard; secretary, H. S. Comstock—both New York City; manager, Jno. T. Herrick, Fairplay; offices New York and Fairplay; owns the Dennison and War Eagle No. 2, two patented and parallel claims, 300x1500 feet each; situated on the east slope of Mt. Bross, three and one-half miles from Alma; developments consisting of a number of shafts aggregating 150 feet, and all in the lime covering of the mountain; the mineral, as far as discovered, being argentiferous galena in pockets, scattered through the lime; improvements—three ore and dwelling houses, etc.

**Mt. Bross Placer.**—George W. Brunk, Alma, and Assyria Hall, Denver, owners; claim covers seventy-three acres; situated between the channels of Summit and Mineral Creeks, Montgomery district; located in 1876; placer developed by 150 feet of fluming and some other workings.

**Mt. Bross Tunnel.**—Owned by Geo. W. Brunk, Alma, and Assyria Hall, Denver; site 3000x6 feet; situated on the Platte River slope of Mt. Bross, Montgomery district; located in 1882; on which a tunnel is driven 350 feet long.

**Mt. Lincoln Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, April 15, 1880; capital stock $6,000,000, in 600,000 shares of $10 each, non-assessable; president, Adams Waltman; treasurer, Geo. F. Work; secretary, George Stark—all Philadelphia; general manager and superintendent, S. B. Schwartz, Alma; offices Room 30 No. 306 Exchange Place, Philadelphia; owns eight claims, 1500x300 feet each, viz.: Main, Main No 1, Mt. Lincoln, Silver, Rogers, Dublin, Huron, and Monster; situated on the Platte River slope of Mt. Lincoln, Montgomery district, eight miles from Alma; located from 1874 to 1880; vein a contact, or lime deposits, overlying the quartzite underneath, and three feet thick, containing galena and sulphurets in a lime-rock gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developed by eight tunnels from 20 to 200 feet in length and some other workings.

**Mt. Lincoln Silver Mining Company.**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, F. S. Garton, New York; vice-president, F. S. Kirkwood; secretary, Edward F. Garton, treasurer, B. Chambero—all Chicago; general manager, Geo. W. Brunk, Alma; offices corner Washington and Dearborn streets, Chicago, and Alma; owns the following claims: Wilson, Lime, Platte, and Flag, 1500x300 feet each; situated on the north spur of Mt. Lincoln, Montgomery district, seven miles from Alma; located in 1871, and Wilson and Lime patented; vein a contact between lime and porphyry, from three to four feet thick, containing galena and lead sulphides and iron oxides in a lime-rock gangue, milling, when sorted, thirty per cent lead and fifty ounces silver per ton; developed by three tunnels from 75 to 150 feet in length; the Lime by an eighty-foot tunnel and three open cuts twenty-five to seventy-five feet in length, and two fifteen-foot shafts; Platte by a fourteen-foot

tunnel with a side drift six feet long; Flag by a fourteen-foot tunnel with a six-foot side drift; improvements—ore-houses, blacksmith-shops, boarding-houses, etc.; output three tons per week.

**Mud-sill.**—(See McLean Mining Company.)

**Nan Harris.**—(See McCrary and Nan Harris.)

**Nancy C., Tioga, and Holman.**—W. J. Mullen, Alma, Colo., Peter Becker and D. A. Cowell, both Leadville, Colo., and C. H. White, Colorado Springs, Colo., owners; Nancy C. and Tioga 1500x300 feet each, and Holman 1500x75 feet; situated on Mt. Cameron, Buckskin district, six miles from Alma; located from 1874 to 1879; vein a fissure from three to four feet wide, pay streak from ten to twenty-four inches, the contents of which mill, when sorted, from $75 to $150 per ton; developed by a tunnel thirty-three feet in length, with some other workings; output fifteen tons.

**Napoleon II.**—Jeremiah A. Greenlaw, Park City, Chas. G. Anderson, Fairplay, and T. E. Stuart, Boston, Mass., owners; claim 1500x300 feet; situated on Loveland Mountain, Buckskin district, three miles from Alma; located in 1875, and in process of patent; vein a contact from two to three feet wide, containing gold and silver bearing quartz, assaying 100 ounces silver and two ounces gold per ton; developed by an open cut twenty-five feet long, and a shaft twenty feet in depth, and two tunnels twenty-five and thirty feet in length.

**Nelis Group.**—Comprising the Nelis, Star of the West, Hill, and Smith and Allen lodes; Wm. Hill and O. C. Steele, both Alma, owners; claims 1500x300 feet each; situated on the Platte River slope of Mt. Bross, Montgomery district, four miles from Alma; located in March, 1880; vein a contact, or lime deposit fifty feet thick, overlying the quartzite underneath, and containing galena and gold-bearing quartz scattered through lime, assaying $51 per ton in silver and gold; developed by four shafts from fifteen to twenty-five feet in depth and a tunnel twenty-five feet long.

**Nesbitt.**—(See Elegant Group.)

**Nestor Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Geo. F. Batchelder, Leadville; vice-president, F. G. Ensign; secretary and treasurer, E. S. Skinner—both Chicago; general manager, J. C. Carrera, Leadville; superintendent, E. E. Cadwell, Park City; offices 125 State street, Chicago, 523 Harrison Avenue, Leadville, and at Park City; owns the Montgomery, Robt. Keeley, Winchester, Gold-Leaf, Silver-Leaf, Illinois, and Blue-grass, covering forty-five acres; situated on the Mosquito slope of Pennsylvania Mountain, one-half mile from Park City, Mosquito district; located in 1879; Montgomery patented, and Robert Keeley, Gold Leaf, Silver Leaf, and Illinois in process of patent; veins probably all fissures, from four to ten feet wide, pay streaks from four to twenty-four inches, containing galena, copper, and gold-bearing quartz, in a lime and porphyry gangue, milling, when sorted, from $40 to $80 per ton; developed by eleven shafts from 10 to 100 feet in depth, two open cuts twenty-five and seventy-five feet in length, and about 800 feet of drifts, with some winzes and stoping; improvements—shaft and ore houses and steam machinery, motive power supplied by a twenty-horse-power engine.

**New England and Colorado Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Hiram Blaisdell, Boston, Mass.; vice-president and general manager, M. Hodgson, Alma; secretary, H. Chapman, Boston, Mass.; treasurer, John G. Anderson, Denver; offices 48 Congress street, Boston, and Alma; owns the Red Lion and Sir Charles, two adjoining and parallel claims, covering sixteen acres; situated on the north or Buckskin slope of Loveland Mountain, Buckskin district, two and one-half miles from Alma, and patented; vein in the former (the principal claim) is in the nature and form of a fissure in a stratified formation of lime and quartzite, alternating each other in layers, and about four feet wide, containing pockets of galena and sulphurets with some wire silver in a lime-rock gangue, milling, when sorted, from 75 to 150 ounces silver per ton, and mineral veins of the same kind of ore at the contact of the lime and quartzite, one of which is about eight inches thick; developments—on the Red Lion eighty feet of tunnels, one shaft 165 feet deep, and some drifting, and on the Sir Charles the developments consist of enough work to get a patent; and owns the Hardenburg Consolidation, thirteen claims, 300x1500 feet each; situated on the Mosquito slope of Pennsylvania Mountain, Mosquito district, two and one-half miles from Alma; developments—one main shaft 100 feet deep and ten other shafts from ten to thirty feet in depth, and all showing fairly; improvements—a plant of machinery for sinking a depth of 500 feet, with some buildings.



**New Haven Mining Company (The).**—Incorporated under the laws of Connecticut, in June, 1881; capital stock $48,000, in 1,920 shares of $25 each, non-assessable; president and treasurer, E. Henry Barnes; secretary, Charles Kimberly—both New Haven, Conn.; superintendent, H. Remington, Alma; offices New Haven, Conn., and Alma; owns two claims, viz.: the Bullion and Modoc, 1500x300 feet each; situated on the north spur of Mt. Lincoln, Montgomery district, six miles from Alma; located in 1874, and patented in September, 1882; vein a contact with lime and porphyry walls and from one to three feet thick, containing galena in a lime-rock gangue, milling, when sorted, sixty ounces silver per ton; developed by four tunnels from fifty to seventy feet in length, with some other workings; improvements—ore, boarding, and bunk houses, office, etc.; output probably $5,000.

**New York, Baltic, and Gray Eagle.**—Three adjoining claims on the same vein as the London Mining Company's property, and covering twenty-eight acres; situated on the Park Range above London Flats, nine miles from Alma, Mosquito district; the New York patented and the others in process; owners August Rische, Denver, and Peter Finnerty and Geo. R. Fisher, both Leadville; vein is a fissure, or, more properly speaking, a fault in the stratified formation (lime and quartzite in alternating layers to the depth of at least 200 feet); width of vein from ten to twenty feet, containing gold-bearing quartz carrying galena, some iron and copper pyrites, and occasionally lead carbonates, the richest mineral appearing in streaks, the general direction of which is the same as that of the vein, the first-class ore milling, when sorted, from $100 to $150 per ton, and the second-class from $50 to $75 per ton; developments—one shaft 100 feet deep and one cross-cut tunnel, cutting the vein at a depth of 200 feet, with some drifting; this property is making regular shipments.

**New York and Colorado Mining, Developing, and Prospecting Company (The).**—Incorporated under the laws of Colorado in March, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, A. P. Curry; vice-president, J. L. Pendery; secretary and assistant treasurer, F. R. Miller; treasurer, James Streeter; superintendent, Wm. Elliott Lee—all Leadville; office 201 East Seventh street, Leadville; owns one claim, viz., the Guido, 1500x300 feet; situated at the foot of Mt. Bross, Buckskin district, five miles from Alma; located in 1879; vein probably a fissure sixteen inches wide, containing galena and iron pyrites, carrying gold and silver; developed by a tunnel forty feet in length.

**New York and St. Louis Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1882; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, A. B. Moore; vice-president, James Wilson—both New York City; treasurer, Wm. McDonald, St. Louis, Mo.; general manager, Michael Goldman, Buena Vista; offices St. Louis and Buena Vista; owns the following claims: Elvin, Ida, Edwin, Cave, and Horseshoe, 1500x300 feet each; situated in the Sacramento district, near Fairplay; located in 1876; veins all contacts from three to eight feet in width, containing galena and carbonates in a lime-rock gangue, milling, when sorted, forty per cent lead and thirty ounces silver per ton; developed by one twelve-foot shaft and three tunnels, forty, sixty, and eighty feet in length; output forty tons.

**New York Shaft.**—Miles McDonald, George W. Brunk, and Matthew and James Moynahan, all Alma, Colo., and Homer Pennock, New York, owners; claim 1500x300 feet; situated on Mt. Bross, Buckskin district, two and one-half miles from Alma; located in August, 1881; on which a shaft 160 feet deep is sunk, designed to cut the Dolly Varden contact, and showing porphyry heavily seamed with iron and copper; improvements—shaft-house, containing a horse whim for hoisting, cabin, etc.

**Newark Mining and Tunneling Company (The).**—Incorporated under the laws of Colorado, June 17, 1882; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, Wm. F. McClelland; vice-president, H. D. Steele; secretary, J. G. Hoffer; treasurer, Jacob Gregory—all Denver; office Room 8 McClelland Block, Denver; owns the Newark and Millionaire lodes, 1500x300 feet each, and patented; situated in Hall's Gulch, Hall Valley district; veins both fissures in a granite formation, in the Newark five feet, containing pockets of galena from two to ten inches in width, milling, when sorted, sixty per cent lead and ten ounces silver per ton; developed by a tunnel on the vein 317 feet in length; and in the Millionaire from ten to twelve feet in width, with no well-defined pay streak, but containing quartz carrying galena through its entire width; developments—a shaft on the vein thirty feet in depth and a cross-cut tunnel 430 feet in length, not yet intersecting the vein, but opening up two other veins five and three feet in width, containing galena and iron pyrites, assaying $64 per ton, in a quartz gangue, on the first of which a thirty-foot drift is run, and on which two locations 1500 x300 feet each have been made, viz., the Capstine and Mary Jane.

**Newport.**—George F. Classon and Max Brockstedt, both Montgomery, owners; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, six miles from Alma; located in September, 1882; vein a contact, with lime and porphyry walls five feet wide, containing chlorides in a lime gangue, assaying fairly in silver; developed by two tunnels twenty and twenty-seven feet in length, with some improvements.

**North American Mining and Developing Company (The).**—Incorporated under the laws of Connecticut; capital stock $500,000, in 20,000 shares of $25 each, non-assessable; directors, Leverett Saltonstall, Percival L. Everett, and Henry C. Wainwright, all Boston, Wm. R. Garrison, deceased, H. A. V. Post, James Whitely, Wm. Pitt Shearman, Chas. H. Clayton, Geo. M. Miller, Benj. H. Bristow, and Wm. H. Speer, all New York City, Wm. Gerlach, Philadelphia, W. A. H. Loveland, Denver, Geo. L. Chase and C. E. Perkins, both Hartford, Conn., Milton Sayles, Cincinnati, and A. P. Jaques, Haverhill, Mass.; president, Leverett Saltonstall; secretary, Wm. Pitt Shearman; office Room 53, 115 Broadway, New York City; the purposes for which this corporation is formed are: to examine, report upon, negotiate, develop, exchange, buy, sell, work, own, and deal in mines and mining properties and interests, and to reduce, mill, smelt, or otherwise work ores, and the mines now being developed are those of the Fannie Barrett Mining Association (see Fannie Barrett Mining Association), besides which it has entered into a contract with the Imperial Mining Association (see Imperial Mining Association) for the development of that Company's property.



**North Star.**—(See Atlantic, Summit County.)

**Nova Zembla Group.**—Eleven claims, viz.: Nova Zembla, Franklin, Mammoth, Andes, Lincoln, Second Advent, Mountain Glen and Mill site, ,Hugh Annex, Garton, and Orton, covering about 115 acres; situated on the south slope of North Star Mountain, six miles from Alma, Montgomery district; located from 1875 to 1881; Nova Zembla, Mammoth, Andes, Second Advent, Mountain Glen, and Mill site patented; owner Geo. W. Brunk, Alma; veins all fissures from two to eight feet in width, pay streaks from six to sixty inches, containing gold-bearing quartz and iron and copper pyrites, milling, when sorted, from one-half to two ounces gold per ton; developments—375 feet of tunneling, 300 feet of shafts, and some drifts; improvements—ore-houses, shaft-houses, boarding and bunk houses, and hoisting machinery, with facilities for taking out from twenty to forty tons of ore per day.

**Nugget Placer.**—S. S. Culbertson and Daniel Stewart, both Alma, Colo., owners; claim 120 acres; situated in Montgomery Gulch, Montgomery district, eight miles from Alma; located in 1881; developments—some surface-workings.

**Occidental.**—300x1200 feet; situated on north-east spur of Mount Lincoln, seven miles from Alma, Montgomery district, and patented; owners Nelson Hallock, Denver, and others; vein a contact, or lime formation overlying the porphyry underneath, and containing pockets of segregated mineral (galena and sulphurets), the same appearing at irregular intervals, milling, when sorted, an average of $75 per ton; developments—600 feet of tunnels, drifts, and shafts, with some improvements.

**Old Constitution.**—Wm. H. Davis, Andover, N. Y., and G. H. Kipp, Alma, owners; claim 1500x300 feet; situated on the north-west slope of Mosquito Mountain, Mosquito district, seven miles west of Alma; located in June, 1882; vein a fissure, eighteen inches wide, containing gold and silver bearing quartz, assaying one-half ounce gold and eight ounces silver per ton; developed by a shaft fifteen feet in depth.

**Ollie.**—Owned by M. A. Lawrence, Alma, Mrs. J. C. Hutchinson, Leadville, and W. D. Houghteling, Chicago; claim 1500x300 feet; situated on the north-west slope of Pennsylvania Mountain, Mosquito district, six miles from Alma; located in September, 1880; vein a vertical fissure three feet wide, pay streak eighteen inches, containing quartz which carries silver and copper, assaying from $25 to $50 per ton; developed by two tunnels thirty-five and thirty feet long.

**Oneida Chief.**—Owners J. G. Brooks, Alma, and E. Y. Harris, New York City; claim 1500x300 feet; situated on the Buckskin slope of Mosquito Mountain, Buckskin district, four miles from Alma; located in 1873; vein a contact, dipping about thirty-five degrees, and four feet thick, pay streak from fifteen to twenty inches, containing galena in a lime-rock gangue, milling, when sorted, sixty ounces silver per ton; developed by an eighty-five-foot tunnel, a thirty-foot shaft from floor of tunnel, and a thirty-five-foot drift from bottom of shaft, and another tunnel thirty-five feet long; output ten tons.

**Ontario.**—John A. Willard, Mankato, Minn., and F. D. Howe, Alma, owners; claim 1500x300 feet; situated on Mount Bross, Buckskin district, three

and one-half miles from Alma; vein a contact two feet wide, pay streak fifteen inches, containing galena and some iron pyrites, assaying from 40 to 150 ounces silver per ton, in a lime-rock gangue; developed by two tunnels, fifty feet long each, with some other workings.

**Orphan Boy Tunnel and Mining Company (The).**—Incorporated under the laws of Colorado, December 4, 1874; capital stock $250,000, in 2,500 shares of $100 each, non-assessable; manager, Wm. A. Morrison, Denver; owns the Orphan Boy and Orphan Boy lode and Mill site, two patented and adjoining claims on the same vein, and together 900 feet long by 200 feet wide; situated in Mosquito Gulch, three miles from Alma, Mosquito district; vein a fissure, and supposed to be the same as the Phillips, with granite walls four feet wide, containing gold-bearing quartz with iron and copper pyrites, milling, probably, an average of $18 per ton; developments—900 feet of tunnel, with winzes, stopes, and drifts running therefrom; improvements—steam machinery for working the mine and the necessary buildings.

**Pacific.**—On North Star Mountain (see Summit County).

**Paris.**—(See Vienna Mining Company.)

**Park.**—T. C. Christianson, Park City, owner; claim 1500x300 feet; situated on Mosquito Mountain, Mosquito district, at Park City; located in 1880; vein a contact, dipping forty-five degrees, and six feet wide, containing galena in a lime-rock gangue, assaying thirty ounces silver per ton; developed by two shafts twenty-five and thirty-five feet in depth.

**Park County Silver Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Geo. H. Shields; vice-president, C. O. Godfrey; treasurer, J. J. Frey—all St. Louis, Mo.; managing director, C. O. Shields, Alma; offices Room 20 Singer Block, St. Louis, and Alma; owns two claims, viz., the Black Hawk and Bulger, 1500x300 and 1021x300 feet, respectively; situated on the Pennsylvania Gulch slope of Pennsylvania Mountain, Pennsylvania district, four miles from Alma; located in June and July, 1879, and Black Hawk patented; vein a contact, or lime deposit, from one to five feet thick, pay streak from four to twenty-four inches, containing galena, sulphurets, and zinc blende, in a lime-rock gangue, milling, when sorted, eight ounces lead and sixty ounces silver per ton; developed by 200 feet of tunnels, drifts, and shafts.

**Parnell Mining Company (The).**—Incorporated under the laws of New York in 1882; capital stock $500,000, in 500,000 shares of $1 each, non-assessable; changed by resolution of the stockholders on December 20, 1882, to $1,000,000, in 200,000 shares of $5 each, non-assessable; president, Joseph M. Hazeltine; vice-president, Wm. A. Ellis; secretary and treasurer, Finley Anderson; general manager, John Sinnott; office 61 Broadway, New York City; owns eleven claims, 300x1500 feet each, viz.: Parnell, Tarra, Grace, May, San José, Delia S., Susie S., Katie S., Moscow, Napoleon, and Ontonagon; situated on London Mountain, one mile from the terminus of the London extension of the D. & S. P. R'y., Mosquito district; located in the spring of 1880; veins all fissures, from one to fifty-two feet in width, containing quartz carrying gold, silver, and copper; developments—one tunnel 390 feet long, cutting three veins, and one shaft 125 feet deep, with a fifty-foot drift from bottom of shaft; all in good mineral.

**Parole.**—C. H. White and Geo. H. Stewart, both Colorado Springs, owners; W. J. Mullen, Alma, agent; claim 1500x300 feet; situated on Loveland Mountain, Buckskin district, five miles from Alma; relocated in 1879, and patented in November, 1882; vein a fissure, four feet wide, pay streak from six to eighteen inches, containing galena and sulphurets in a lime and porphyry gangue, milling, when sorted, from 123 to 194 ounces silver per ton; developed by 300 feet of shafts, drifts, and levels, with some improvements.



**Pennsylvania Consolidated Mining and Milling Company (The).**—Incorporated under the laws of Colorado, May 23, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Dr. J. M. Harding; vice-president, Wm. R. Barr—both Oil City, Penn.; secretary, B. C. Hoag, Pleasantville, Penn.; manager, J. P. Ibson, Alma; office Room 2 Alkire Block, 291 Sixteenth street, Denver, and at Alma; owns five claims, 300x1500 feet each, viz.: Excelsior, Pennsylvania, Young Blue Tiger, Gray Eagle, and Sunny South; situated on the south slope of Mt. Bross, two and one-half miles from Alma, Buckskin district; located in 1879, except the Excelsior, prior to 1870, and in process of patent; vein a contact from one to twelve feet wide, containing pockets of sulphurets, galena, gray and yellow copper, and iron and lead carbonates, the first-class ore milling, when sorted, $250 per ton, and the second-class $50, the assays ranging from $25 to $750 per ton in silver, gold, and lead, and the quartz, which goes to make up a large portion of the vein-matter, containing from $5 to $10 in gold; developments—on the Excelsior one shaft 155 feet deep, cut at a depth of seventy-five feet by a tunnel 480 feet long, from the level of which tunnel is sunk a shaft 400 feet deep, the bottom of which connects with another tunnel 380 feet long, and 490 feet of drifting, and another tunnel 150 feet long on the vein, and on the other claims there is one shaft each, from ten to seventy-five feet in depth, and some open cuts and tunnels; owns the Golden Star placer, eighty acres, adjoining the lode claims; located August, 1880; developments—two twelve-foot shafts, 300 feet of fluming, fifty feet of ditching, and worked by ground sluice.

**Phillips Group.**—Five patented adjoining claims on the same vein, and covering 3500x300 feet; situated in Buckskin Gulch, at the old town of Buckskin, one and one-half miles from Alma; owners, in separate interests, Jno. Q. A. Rollins, Rollinsville; N. J. Bond, Council Bluffs, and J. B. Stansell, Leadville; vein a vertical fissure, varying in width from ten to twenty-five feet, and containing a gold-bearing quartz carrying iron pyrites, portions of which mill $100 per ton, and other portions being entirely barren; the developments consisting of pits, or surface-workings, aggregating about 500 feet, 180 feet of tunneling, and one forty-foot shaft; output estimated at $500,000.

**Phœnix Group.**—Comprising the Phœnix, Superior, Crescent, Colossus, Copperopolis, Falcon, Summit, and Beta lodes, 1500x300 feet each; John A. Willard, Mankato, Minn., O. P. Whitcomb, St. Paul, Minn., and F. D. Howe, Alma, owners; claims situated at the head of Platte River, Montgomery district, twelve miles from Alma; located in 1880; veins all fissures, from two feet to forty feet in width, containing gold-bearing quartz (stamp-ore), assaying $40 per ton, and copper pyrites and silver sulphides (smelting-ore), milling, when sorted, from $40 to $100 per ton; developed by six tunnels aggregating 175 feet and 160 feet of open cuts.

**Pine Tree Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Peter Fish; vice-president and treasurer, J. Edwards Fay; secretary, Elias P. Read—all Chicago, Ill; manager, M. A. Lawrence, Alma, Colo.; offices 162 Washington street, Chicago, Ill., and Alma, Colo.; owns one claim, the Cornucopia; situated on the north-west slope of Pennsylvania Mountain, Mosquito district, six miles from Alma; located in September, 1880; vein a fissure, with a crevice eight feet wide, pay streak from two to three feet, containing decomposed quartzite, carrying gold and silver, milling, when sorted, from one to three ounces gold three and and one-half ounces silver per ton; developed by one

open cut on the vein eighteen feet long, a prospect tunnel fifty-eight feet, and working tunnel 264 feet long, cutting vein at a depth of 254 feet; and owns the Lawrence placer, covering 110 acres, and adjoining the lode claim.

**Pioneer Mill.**—George W. Brunk, Alma, owner; building 60x80 feet, erected on a five-acre mill site; and situated on the Platte River, at Montgomery, and six miles from Alma; containing twenty Stamps and two Concentrators, motive power supplied by a 125-horse-power engine; capacity forty tons per day (twenty-four hours).

**Pittsburgh.**—Mrs. Sophie Hoffman, Dudley, owner; claim 1500x300 feet; situated in Sacramento Gulch, Sacramento district, eight miles from Fairplay; located in 1880; vein probably a fissure, varying in width, pay streak six inches, containing galena in a porphyry and lime-rock gangue; developed by one thirty-two-foot shaft.

**Platte Head Mining and Milling Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $600,000, in 60,000 shares of $10 each, non assessable; president, J. S. Hanna; vice-president, James Stockton; secretary, T. D. Anthony—all Leadville; treasurer, E. P. Slade, Alma; general manager, J. W. Strong, Dodge City, Kansas; offices Leadville and Alma; owns the following claims: Bismuth, Louis Frederick, Stockton, Francis Orion, and Red Jacket, 1500x300 feet each; situated on North Star Mountain, Montgomery district, seven miles from Alma; located in 1882; veins all fissures from one and one-half to four feet wide, pay streaks from four to twenty inches, containing gold-bearing quartz (stamp-rock) and copper and iron pyrites (smelting-ore); developed by five shafts from ten to twenty feet in depth.

**Present Help.**—Louis Dugall, Denver, owner; claim 1000x300 feet; situated on Mt. Lincoln, Montgomery district, six miles from Alma; vein a contact, with lime and porphyry walls, and from one to five feet thick, containing galena and sulphurets, with some gray copper in a lime-rock gangue, milling, when sorted, from 50 to 700 ounces silver per ton; developed by two tunnels 80 and 150 feet in length, with considerable other workings and some improvements.

**Pride of Mt. Lincoln.**—Dr. O. H. Pierson, 22 West Ninth street, New York, owner; H. H. Richardson, Alma, manager; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, five and one-half miles from Alma; located in 1880; vein a contact, with lime and porphyry walls, pay streak ten inches, containing galena and yellow copper, assaying from twenty to thirty ounces silver per ton, in a lime-rock gangue; developed by two open cuts ten and fifteen feet in length.

**Queen of the Lakes Mining Company (The).**—Incorporated under the laws of West Virginia, in March, 1882; capital stock $250,000, in 50,000 shares of $5 each, non-assessable; president, Frank H. Perkins; secretary and treasurer, Charles E. Mixer—both Boston, Mass.; superintendent, C. L. Lightburn, Alma; offices 106 Milk street, Boston, and Alma; owns two claims, viz., Queen of the Lakes and Queen of the Lakes No. 2; situated at the head of Buckskin Gulch, Buckskin district, five miles from Alma; located in 1879 and 1880, and in process of patent; veins both fissures, from one to two and from two to five feet wide, respectively, pay streaks from ten to thirty inches, containing galena and sulphurets in a porphyry lime-rock gangue, milling, when sorted, from 25 to 1,000 ounces silver per ton; developments—on the first, three thirty-foot shafts, and on the last three tunnels, 200, 60, and 30 feet long, with some drifting and improvements; output 100 tons.



**Queen of the Platte, Nos. 1 and 2.**—Daniel Stuart, Alma, and E. E. Whelpley, Denver, owners; claims 1500x300 feet each; situated on North Star Mountain, Montgomery district, seven miles from Alma; located in 1882; vein a fissure, with crevice four feet wide, pay streak eighteen inches, containing gold-bearing quartz (stamp-rock), yielding fairly, and iron and copper pyrites, with some galena (smelting-ore), assaying $100 per ton; developed by two open cuts twenty feet long each.

**Queen of the West.**—J. G. Brooks and J. A. Pierce, both Alma, and Frank Coley, Denver, owners; claim 1500x300 feet; situated on Mt. Lincoln, Montgomery district, four miles from Alma; located in 1874; vein probably a fissure, five feet wide, pay streak three feet, containing galena and iron pyrites in a lime-rock gangue, milling, when sorted, $30 per ton; developed by a tunnel thirty feet in length and a forty-foot open cut; output 250 tons.

**Quincy Mining Company (The).**—Incorporated under the laws of Colorado, in the fall of 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Dr. Jno. Smith; secretary, Edgar Smith; general manager, C. F. Weller—all Quincy, Ill.; treasurer, C. C. Jansen, Hall Valley; office Quincy, Ill.; owns the Bullion and Brookfield lodes, 300x1500 feet each; situated on the north slope of Bullion Mountain, nine miles from Webster, Hall Valley district; veins both fissures, in the former ten inches wide, containing free-milling gold and silver bearing quartz, yielding, when sorted, $50 per ton; developed by two tunnels 240 and 150 feet long, and on the latter assessment work.

**Randolph Group.**—(See Imperial Mining Company.)

**Ready Pay Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Thos. B. Lee; vice-president, Jno. D. Lorden; secretary, Elias P. Reed; treasurer, A. R. Dempster; superintendent, C. R. Waters; offices 162 East Madison street, Chicago, and at Alma; owns two claims, viz.: the Ready Pay and Derigo; patented in 1882; the former situated at the summit of Hoosier Pass, six miles from Alma, Montgomery district; vein a fissure four feet wide, with granite walls, and traceable on the surface for a great distance, the vein-matter being composed of mineralized but decomposed slate, quartz, and spar (free-milling); developments—two shafts seventy-two and sixty-three feet deep, with an eighteen-foot drift from the bottom of the former; and the latter situated on the low pass between Montgomery and Silver Lake, near the Ready Pay, same district; vein a contact, with a quartzite and granite hanging and a lime foot-wall, five feet wide, pay streak twenty inches, containing porphyry carrying galena specked with iron pyrites; developments—one twenty-five-foot open cut and one thirty-five-foot incline; flattering assays have been obtained from both these claims; in addition to which the Company owns sixty acres of timber land lying between them.

**Red Lion.**—(See New England and Colorado Mining Company.)

**Revere.**—Situated on the Platte River slope of Mt. Lincoln, one mile from Montgomery, Montgomery district; located in 1880; owners W. H. Calkins, Laporte, Ind., J. H. Kitchen, J. R. McKee, and S. B. Martindale, all Indianapolis, and Eugene D. Taylor, Alma; vein a fissure ten feet wide, with schist walls, and containing gold-bearing quartz (stamp-rock), iron and copper pyrites, with galena (smelting-ore), assaying from $10 to $20 in silver and gold, but twenty inches of which assays from $18 to $24 per ton; developed by one seventy-foot tunnel.

**Riverside.**—Owned by Wm. Benson, F. G. and M. Sayer, and D. A. Currier, all Montgomery; claim 1500x300 feet; situated on the western slope of Silver Heels Mountain, Montgomery district, one mile from Montgomery; located in 1882; vein probably a contact, three feet wide, pay streak from four to six inches, containing galena, assaying fifty ounces silver per ton, in a lime and porphyry gangue; developed by fifty feet of shafting.

**Rob Roy Group.**—Consisting of Rob Roy, Josie, Black Fanny, Ouray, and Pelican, 1500x300 feet each, Viola May, 900x300 feet, and a five-acre mill site; W. E. Traver, Alma, and Richard J. George, Montgomery, owners; group situated on North Star Mountain, Montgomery district, eight miles from Alma; located in 1878 and 1882; veins all fissures, averaging four feet in width, pay streaks two feet, containing gold and silver bearing quartz (stamp-rock), yielding fairly, and iron and copper pyrites and galena (smelting-ore), milling, when sorted, from $30 to $60 per ton; Rob Roy developed by two shafts twenty-five and fifty-five feet in depth and two ten-foot face cuts, and others by shafts from ten to thirty feet in depth, one on each claim, with some other workings; improvements—shaft-houses, boarding-houses, etc.; output forty tons.

**Robert Burns.**—(See Chicago and Robert Burns.)

**Robert E. Lee.**—John O'Bryan and Daniel Kehoe, both Alma, and J. E. Ewing, Leadville, owners; claim 1500x300 feet; situated in Buckskin Gulch, Buckskin district, two miles from Alma; located in May, 1880; vein a contact, three feet thick, pay streak eighteen inches, containing black sulphurets and iron and copper pyrites, assaying from thirty-five to fifty ounces silver per ton, in a lime-rock gangue; developed by a shaft forty feet in depth.

**Rock of Ages.**—J. Delaney, Dudley, and James McAndrews, Buckskin, owners; claim 1500x300 feet; situated on Cameron Mountain, Buckskin district, seven miles from Alma; located in June, 1882; vein a fissure, eighteen inches wide, pay streak four inches, containing galena in a lime and porphyry gangue; developed by one fifteen-foot tunnel.

**Rome Mining Company.**—Incorporated under the laws of New York; president, Geo. R. Blanchard; secretary, H. S. Comstock—both New York City; general manager, Jno. T. Herrick, Fairplay; offices New York and Fairplay; owns Souvenir, Venus, B F D, South End and Tunnel (patented), and Baltic and Fair Lady (unpatented), seven adjoining claims on the same vein (the London), 300x1500 feet each, except the Venus, 1500x160; situated on the Sacramento slope of Pennsylvania Mountain, and extending across Big Sacramento Creek, seven miles from Alma, Sacramento district; vein a fissure, from twenty to sixty feet wide, in a formation somewhat the same as the London, and containing ore of a similar character and quality; developments—about 1,000 feet of tunneling and sixty feet of shafting.

**Ruby and Rowena.**—Owned by Platt McDonald and H. V. Reed, both Chicago, and S. J. Foy, Denver; claims 1500x300 feet each; situated on Mt. Bross, Montgomery district, two and one-half miles from Alma; vein a contact, sixteen feet, containing galena and carbonates scattered through the lime-rock, milling, when sorted, twenty-eight ounces silver per ton; developed by a drift on the vein seventy feet long and an open cut 700 feet long on the vein; output 400 tons.

**Russia Placer.**—155 acres; situated on the west side of the Platte River, five miles above Alma, Montgomery district, and patented in 1883; owner Finlay McMartin, Dixon, Ill.; developments—1,000 feet of ditching supplied with water from the Platte River and having 100 feet fall, besides numerous surface-openings.



**Russia Silver Mining Company (The).**—Incorporated under the laws of New York, in 1877; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, Americus L. Pogue, Richmond, Ind.; manager, W. H. Grose, Alma; office Alma; owns four claims, 300x1500 feet each, viz.: Moscow, Russia, Hoosier, and Pogue; situated on the east slope of Mt. Lincoln, two miles from Alma, Montgomery district, and patented in 1876-7; vein a horizontal contact of the overlying lime formation with the quartzite underneath, from seven to seventy inches thick, containing pockets of galena and gray copper with some sulphurets and brittle silver; the pay vein in the Russia averaging about fourteen inches, and containing in addition copper pyrites and sometimes brittle silver, the first-class ore milling, when sorted, 200 ounces silver, the second-class 100 ounces, and the third-class forty ounces, per ton; developments—one main tunnel 500 feet long, with a series of side-drifts and levels from twenty-five to seventy-five feet in length, and two other tunnels 200 and 60 feet long, respectively; improvements—boarding and bunk houses, ore-houses, etc.; monthly output about ten tons.

**Sacramento Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; president, Graham Blandy; vice-president, C. G. Hodson; secretary and treasurer, C. G. Blandy—all New York City; general manager, W. H. Grose, Alma; offices 62 Broadway, New York, and Alma; owns eight claims, viz.: the Sacramento, Ada, Jessie, October, Lark, Anna Boby, Watseka, and November, 1500x300 feet each; situated in Spring Gulch, Sacramento district, six miles west of Fairplay; located in 1879, and partially patented; vein a contact, or lime formation from one to seven feet thick, overlying the porphyry underneath, containing pockets, or deposits, of galena, sulphurets, and carbonates, scattered irregularly through the lime-rock, milling, when sorted, from $25 to $750 per ton, and averaging probably $200; Sacramento developed by two tunnels 80 and 120 feet in length, with a series of drifts running therefrom; Jessie by two shafts fifty and thirty feet in depth; October by a tunnel 180 feet long, with a series of drifts running therefrom from 20 to 150 feet in length, and a shaft 140 feet deep; Lark by a tunnel 340 feet long, with a series of drifts from 20 to 150 feet in length, and a ninety-foot shaft; Anna Boby by a fifty-foot shaft; November by a twenty-foot shaft and some surface-openings; improvements—ore-houses, boarding and bunk houses, etc.; output $228,000.

**Saltiel Mica and Porcelain Company (The).**—Incorporated under the laws of Colorado; president, J. H. Jones, Denver; vice-president and general manager, E. H. Saltiel; office Denver; owns the Talisman lode and forty acres of land; situated on Currant Creek, six miles from the Fremont line; containing a vein of mica; developed by a series of adits, with some improvements; annual output 100 tons.

**Sarah Ellen.**—J. W. Strong, Dodge City, Kas., and I. B. Ells, Nova Scotia, owners; 1500x300 feet; situated on North Star Mountain, Montgomery district, seven miles from Alma; located in 1881; vein a fissure fourteen feet wide, pay streak from one to two feet, containing silver-bearing quartz and galena, assaying from 30 to 120 ounces silver per ton, in a quartz gangue; developed by an adit on the vein twenty feet long and a ten-foot shaft.

**Saturn.**—J. R. Curley, Leadville, Jacob Houghton, New York, and estate of Wm. B. True, Detroit, Mich., owners; claim covers seven acres; situated on Little Sacramento Hill, Sacramento district, seven miles from Fairplay, and patented in 1882; vein probably a fissure, containing galena and sulphurets in a lime and porphyry gangue, milling, when sorted thirty per cent lead and fifty ounces silver per ton; developed by a shaft sixty feet in depth and forty-three feet of drifts.

**Shamrock.**—A. Gallagher, Thomas McAndrews, and Boyd Bros., all Alma, owners; claim 1500x300 feet; situated on Mount Bross, Montgomery district, four and one-half miles from Alma; located in 1873, and in process of patent; vein a contact or lime formation from one to six feet in thickness, overlying the porphyry underneath, containing sulphurets and galena in a lime-rock gangue, milling, when sorted, fifteen ounces silver per ton; developed by four tunnels from 75 to 100 feet in length and a shaft twenty-five feet deep.

**Shelby.**—(See Golden Gate and Shelby.)

**Sherwood Group.**—Three claims, 1500x300 feet each; H. J. Starr, Fairplay, owner; group situated in Little Sacramento Gulch, Sacramento district, seven miles from Fairplay, located in 1879; vein a contact four feet in thickness, containing galena and copper pyrites, assaying $100 per ton, in a lime-rock gangue; developed by 400 feet of tunneling and a shaft twenty-five feet deep; output twenty tons.

**Sidney, New Castle, and Melbourne.**—Three claims, 300x1500 feet each; situated in Horseshoe Gulch, six miles from Fairplay, Horseshoe district; located in 1881; owner Nathan Cohn, Leadville; developments—one shaft 120 feet deep, showing a contact vein, varying in thickness, and containing black limestone carrying argentiferous galena.

**Silver Cave Group.**—Five claims, viz.: Silver Cave, Silver Cave Extension, Avondale, Missouri, and Kentucky; Augustus Birswanger, L. Bowman & Co., both St. Louis, Mo., and H. L. Rice, Fairplay, owners; group covers forty-eight and one-half acres; situated on Sacramento Mountain, Sacramento district, seven miles from Fairplay; located in 1879; veins all contacts from ten to thirty feet in width, pay streaks from three to twenty-two inches, containing hematite iron and galena, assaying fifty ounces silver per ton, in a lime-rock gangue; developed by a tunnel 130 feet in length, opening up a natural cave, disclosing galena and iron carbonates.

**Silver Gem.**—W. H. Stevens, Detroit, Mich., and others, owners; claim 1500x300 feet; situated on Mount Bross, Buckskin district, five miles from Alma; vein a horizontal contact from three to five feet wide, containing gray copper, sulphurets, and galena in a lime-rock gangue, milling, when sorted, from 50 to 350 ounces silver per ton; developed by three tunnels from 60 to 160 feet in length, 300 feet of drifting, with some other workings and improvements.

**Silver King.**—H. H. Richardson and Jacob Snell, both Alma, owners; claim 1500x300 feet; situated on the Mosquito Range, Buckskin district, two and one-half miles from Alma; located in 1882; vein probably a fissure, four feet wide, pay streak eight inches, containing galena, assaying from ten to seventy ounces silver per ton, in a lime-rock gangue; developed by two open cuts on the vein ten and twenty feet in length.

**Silver Wave.**—Owners G. W. Snell, T. J. Wood, and Louis Adrian, all Alma; claim 1500x300 feet; situated on the south-west slope of Mount Bross, Buckskin district, two and one-fourth miles from Alma; located in August, 1879; containing one vertical fissure vein, with a pay streak fourteen inches wide, and one horizontal contact eight feet thick, containing free-milling gold and silver quartz, galena, iron and copper pyrites, and hematite iron, in a lime-rock gangue, milling, when sorted, one ounce gold and twelve ounces silver per ton; developed by five tunnels, 18, 35, 40, 79, and 100 feet in length, with some other workings.



**Silver Wave Group.**—Three claims, 300x1500 feet each, viz.: Silver Wave, Keystone, and Emily; W. E. Traver, Alma, and W. J. McNamara, Montgomery, owners; group situated on the crest of North Star Mountain, Montgomery district; located in 1879; veins all fissures from five to twenty-five feet in width, containing seams of gold-bearing quartz (stamp-rock), yielding fairly, and galena with some pyrites (smelting-ore), assaying from 25 to 200 ounces silver per ton; developments—150 feet of shafts and open cuts.

**Smuggler.**—F. F. Mullen, Alma, and Edward Quigley, Denver, owners; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, seven miles from Alma; vein a fissure, five feet, containing gold-bearing quartz (stamp-rock), yielding fairly, and copper and iron pyrites (smelting-ore), assaying $75 per ton; developed by one thirty-foot shaft.

**South Park Coal Mines.**—Owned by the Union Pacific Railroad Company; situated at Como; containing extensive deposits of excellent bituminous coal, yielding, perhaps, a better class of coke than any other mine in Colorado; the developments and improvements being extensive, and the output about 75,000 tons.

**Sovereign Gold Mining Company (The).**—Incorporated under the laws of New York, in 1875; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, Henry Cummins; secretary, John Cummins—both New York; office No. 2 Wall street, New York, and Alma; owns five adjoining claims on the same vein, 300x1500 feet each, viz.: Logansport, Chicago, Columbia, Buckeye, and Winlock; situated on the east slope of North Star Mountain, six miles from Alma, Montgomery district; the first four located in 1860 and patented in 1878, and the last in August, 1882; vein a well defined fissure, from four to eight feet wide, the vein-matter being quartz, calcspar, and iron, containing gold, silver, and copper, the gold being found both free and alloyed with other metals, the silver as a combined sulphuret, the copper in the form of pyrites and purple copper, the free-milling ore yielding, when sorted, from $10 to $30 per ton, and the smelting-ore from $25 to $150 per ton, seven tons taken from all across the vein milling over $30 per ton; developments—ten tunnels from 37 to 300 feet in length, ten shafts from 30 to 200 feet in depth, and surface-cuts covering over 500 feet; improvements—steam and water-power machinery, ore-houses, shaft-houses, saw-mill, etc.

**St. James, Nos. 1 and 2.**—A. H. Estes, Denver, and J. A. Pierce, Alma, owners; claims 1200x300 feet each; situated on the north-east slope of Mt. Bross, Montgomery district, two miles from Alma; located in July, 1882; vein probably a fissure, varying in width, and containing gold and silver bearing quartz; developed by shaft 125 feet in depth and some other workings; worked by a six-horse-power engine, with ample boiler and other improvements.

**Stanley.**—Wm. Livingstone, Dudley, owner; claim 1500x300 feet; situated on Mt. Bross, Montgomery district, two miles from Alma; located in 1882; vein probably a fissure, six feet, containing gold and silver quartz, assaying from one to ten ounces gold per ton; developed by a shaft fifteen feet in depth.

**Star of the West.**—(See Nelis Group.)

**Stonewall Jackson.**—F. Weiner and Edward Morgan, both Alma, owners; claim 1500x300 feet; situated on Treasure Hill, Mosquito district, six miles from Alma; located in 1879; vein probably a fissure, four feet wide, pay streak three feet, containing black sulphurets and some wire silver, assaying from 100 to 1,000 ounces silver per ton; developed by two tunnels, thirty-five and sixty-five feet in length.

**Tarryall Placer.**—350 acres; situated in Tarryall Gulch, one mile from Hamilton, Tarryall district; located in 1876; owners August Rische, Geo. W. Barrett, and Assyria Hall, all Denver; developments—4,000 feet of ditch and one-half mile of fluming; production probably $2 per cubic yard.

**Taylor Group.**—Comprising the Taylor and Taylor Extension, two adjoining claims on the same vein, and the Geranium; owners Hiram Stevenson and Eugene D. Taylor, both Alma, and J. C. Christie, Montgomery; claims 1500x300 feet each; situated on the north slope of Mount Lincoln, Montgomery district, seven miles from Alma; located in January, 1882; veins all fissures, from one to seven feet wide, pay streaks from six to twelve inches, containing gold and silver bearing quartz, assaying from $30 to $50 per ton; developed by two tunnels ten and fourteen feet in length and one open cut twelve feet long with a fourteen-foot face.

**Tecumseh.**—Owned by J. Granville Sharp, Hall Valley; claim 300x1500 feet; situated near the head of Hall's Gulch, about 1,000 feet from the Whale mine, Hall Valley district; vein a fissure, in a granitic gneiss formation, averaging five feet in width, pay streak about eight inches, containing galena and gray and yellow copper in a quartz gangue, milling, when sorted, from 100 to 175 ounces silver per ton; developments considerable.

**Tennessee Group.**—Five claims, viz.: Tennessee, Tennessee No. 2, Davenport, Leadville, and Red Flag; situated on Pennsylvania Mountain, above the Hock-Hocking, four and one-fourth miles from Alma, Mosquito district; owners H. C. Williams and Harry Morgan; veins all contacts, varying in thickness and containing lime porphyry, carrying gold and silver, assaying from twenty-five to seventy-five ounces silver per ton; developments—five shafts from twenty-five to eighty feet in depth each.

**Tioga.**—(See Nancy C., Tioga, and Holman.)

**Tippecanoe.**—(See Montgomery Queen and Tippecanoe.)

**Troy.**—(See Lancaster Mining Company.)

**Troy Mining Company (The).**—Incorporated under the laws of Colorado, in the fall of 1882; secretary and treasurer, E. S. Skinner, Chicago; owns six claims, viz.: Union, 200x1500 feet; situated on the Mosquito slope of Buckskin Mountain, four miles from Alma, Mosquito district, and patented; ore—galena and sulphurets, milling, when sorted, about 100 ounces silver per ton, the mineral appearing in segregated pockets, scattered through the contact of the lime and the quartzite, the latter alternating each other in layers, in addition to which there are spurs running in various directions through the porphyry, containing similar ore to that in the contact; developed by 100 feet of tunnels; Alice and Little Nell, two adjoining claims on the same vein, a fissure, three feet wide, pay streak six inches, containing gold-bearing quartz, iron and copper pyrites, and galena, milling, when sorted, about $50 per ton; developed by 150 feet of shafts and some drifting; Emma C. and Brown, two adjoining claims on the same vein, lying parallel with and adjoining the two last, containing two veins, both fissures, three feet wide each, pay streak five inches, composed of gold quartz, iron and copper pyrites, and galena, milling, when sorted, about $50 per ton; developed by 270 feet of shafting; and the Orphan Boy Extension; vein a fissure thirty inches wide, pay streak from two to three inches of gold-bearing quartz, iron and copper pyrites, and galena (or the same as the Orphan Boy), milling, when sorted, about $40 per ton; developed by fifty feet of shafts; the five claims being 300x1500 feet each, and patented; situated on the Mosquito Flat, one-half mile above Park City, Mosquito district.



**U. P. and K. P.**—Two parallel claims, 300x1500 feet each; situated on the Mosquito slope of Buckskin Mountain, three miles from Alma, Mosquito district; owner S. P. Lunt, Alma; veins both fissures, in a stratified formation of lime and porphyry, the top layer being lime, under which are alternating layers of lime and porphyry, and at the contact of which layers are pockets of mineral similar to that of the main vein; ore—galena and sulphurets, appearing in segregated pockets scattered irregularly and generally in the lime, milling, when sorted, from fifty to seventy-five ounces silver per ton; developments—about 450 feet of tunnels; improvements—a gravitation-wire tram-way, with double tracks, and a three-fourths-inch wire cable, 600 feet long, connecting the mine with a stamp-mill, owned by the same party, and driven by water-power.

**Union.**—(See Troy Mining Company.)

**Union Gold and Silver Mining Company (The).**—(See Lake County); owns the Alcyon and Orion, 1500x300 feet each; situated on Mt. Lincoln, Montgomery district; veins both horizontal contacts, from two to ten feet in width, pay streaks from four to twelve inches, containing galena, assaying from 20 to 100 ounces silver per ton, in a lime-rock gangue; developments—assessment work.

**Vanderbilt.**—John Brogan, Alma, and H. M. Brady, Leadville, owners; claim 1500x300 feet; situated on the Mosquito Range, Mosquito district, eight miles from Alma; located in 1880; vein a contact five feet thick, pay streak six inches, containing gold and silver quartz, assaying one ounce gold and ninety ounces silver per ton, in a lime-rock gangue; developed by a shaft twenty-seven feet in depth and a drift eighteen feet long.

**Vega.**—J. L. Headstrom, John Ling, and John Ahlstrom, all Montgomery, owners; claim 1500x300 feet; situated on North Star Mountain, Montgomery district, three-fourths mile from Montgomery; located in 1881; vein a fissure three feet wide, pay streak eighteen inches, containing gold-bearing quartz, iron and copper pyrites, and galena, assaying one ounce gold and fifteen ounces silver per ton; developed by a shaft twenty feet in depth.

**Vienna Mining Company (The).**—Incorporated under the laws of New York; president, Geo. R. Blanchard; secretary, H. S. Comstock—both New York City; general manager, Jno. T. Herrick, Fairplay; offices New York and Fairplay; owns Paris and Mother, two patented and adjoining claims on the same vein (the London), 300x1500 feet each; situated on the south slope of London Mountain, and in the south fork of Mosquito Gulch, seven miles from Alma; vein a fissure from twenty to sixty feet wide, in the same formation as the London and containing ore of a similar character and quality, allowing for the difference in the developments, which consist of about 300 feet of tunnels, the mineral in this vein invariably improving with depth.

**Wabash.**—300x1500 feet; situated at the head of Mosquito Gulch, seven miles from Alma, Mosquito district; owners J. F. Burrow, E. R. Redman, and E. D. Taylor, all Alma; vein a fissure, varying in width, pay streak ten inches, containing sulphurets and galena, assaying from $25 to $350 per ton, in a lime-rock gangue; developed by one ten-foot shaft.

**Weston.**—300x1500 feet; situated on Pennsylvania Mountain, adjacent to the Hock-Hocking, four miles from Alma, Mosquito district; located July, 1879; owners D. O. Darnell and J. P. Cartwright, both Park City; vein a fissure from four to six feet wide, containing gold and silver bearing quartz and galena, milling, when sorted, about $50 per ton; developed by one shaft 125 feet deep and some drifting.

**Whale.**—(See Comet Consolidated Mining Company.)

**Wheeler Extension Mining Company (The).**—Incorporated under the laws of New York, in August, 1881; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, H. Roudebush, New York; secretary, W. K. Smith, Leadville; treasurer, Merchants' Trust Company, New York; general manager, L. D. Coe, Leadville; offices 217 Equitable Building, New York City, and Alma; owns the Wheeler and Wheeler Extension lodes, 1500x300 feet each; situated at the head of the Platte River, Montgomery district, nine miles from Alma; located in 1878; vein a fissure, forty feet wide, with a pay streak on each wall twelve and thirty inches in width, containing gold-bearing quartz, milling, when sorted, from one-fourth to ten ounces gold per ton; developed by three tunnels from seventy-five to ninety-six feet in length and some other workings, showing large ore-reserves.

**White Quail and White Quail Extension.**—George Bailey, J. S. Kearney, and L. Hughes, all Alma, owners; claims 1500x300 feet each; situated at the head of Buckskin Gulch, Buckskin district; located in 1879; vein a fissure, three feet wide, pay streak six inches, containing gold and silver bearing quartz, assaying one and one-half ounces gold and fifty ounces silver per ton; developed by a shaft sixteen feet in depth and an open cut forty feet long.

**Willey Coal Claim.**—Thomas T. Willey and Thomas Hubbard, both Fairplay, Colo., owners; claim covers 160 acres of patented ground; situated one-fourth mile south of Como; located in 1874; containing a stratum of bituminous coal varying in thickness.

**Wilson.**—(See Mt. Lincoln Silver Mining Company.)

**Wool-sack Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and general manager, J. H. Smith, Dowagiac, Mich.; secretary and treasurer, Wm. M. Heazdit, Denver; offices Alma and Dowagiac, Mich.; owns three claims, viz., the Wool-sack, Dowagiac, and Colorow, 1500x150 feet each; situated on Mt. Bross, Buckskin district, at the old town of Buckskin; located in 1880; veins all fissures, from four to six feet in width, and pay streaks from four to thirty inches, containing iron pyrites and galena, assaying from $25 to $100 per ton; developed by three shafts fifty feet deep each.

**Wyandotte Consolidated Mining Company (The).**—Incorporated under the laws of Colorado in August, 1882; capital stock $2,000,000, in 40,000 shares of $50 each, non-assessable; president and treasurer, E. H. Keables, M. D., Pella, Ia.; vice-president and manager, A. E. Keables; secretary, E. P. Slade—both Alma; office Alma; owns the Wyandotte and Ora King, two adjoining claims on the same vein, and O. K., 1500x300 feet each; situated on the south slope of Democrat Mountain, and at the head of Buckskin Gulch, Buckskin district; located in 1876; vein a fissure four feet in width, containing two pay streaks, one on each wall, ten and twelve inches; ore—mineralized quartz, galena, and iron and copper pyrites, milling, when sorted, from $100 to $200 per ton; developed by four tunnels, sixty, fifty-five, twenty-five, and twenty feet in length; output seventy-five tons.

**Young America.**—George Kline and C. A. Wright, both Fairplay, owners; claim 1500x300 feet; situated in the Mosquito district, near Alma;



located in 1882; vein a fissure three feet wide, containing gold quartz, assaying $30 per ton; developed by a shaft thirty-five feet in depth and an open cut twenty feet long.

**Ypsilanti.**—300x1500 feet; situated on the Hall's Gulch slope of Bullion Mountain, nine miles from Webster, Hall Valley district; owner Col. J. B. Stone, Denver; vein a fissure thirty inches wide, pay streak from ten to eighteen inches, containing galena, gray copper, and native copper with ruby silver in a quartz gangue, milling, when sorted, about fifty per cent lead and forty ounces silver per ton; developments—400 feet of levels and drifts; output fifty tons.

# Pitkin County.

This County was created by a division of Gunnison, in 1880, and is bounded on the north by Garfield and Eagle, on the east by Lake, on the south by Gunnison, and on the west by Gunnison, Delta, and Mesa Counties. It has an estimated population of 2,500, and covers an area of 1,100 square miles, the principal towns being Aspen (county seat) and Ashcroft.

The geological features are peculiar, and vary greatly in different sections. At Independence the formation is mica slate, the gangue-matter quartzose, and the ores a mixture of the sulphides of iron, zinc, copper, and lead; at Aspen the country-rock principally limestone, the lodes contacts between lime and porphyry or lime and quartzite, and sometimes bedded in the limestone; and at Ashcroft the formation is granitic and eruptive.

The prominence of Pitkin as a mining center dates from 1879, the year of the hegira from Leadville. Its isolated position is its chief drawback, the best means of communication being rough wagon roads. Independence has an available outlet to the Arkansas Valley, but the remaining districts are completely out of the range of all the advantages essential to progress and prosperity. The County, however, is prolific in mineral resources (few sections of the Rocky Mountain System more so), and with the facilities enjoyed by the more favored localities it would become a leading center of productive industry. The result of the work thus far accomplished is about $300,000 in bullion, besides large quantities of valuable ore shipped to market, and considerable amounts of medium and low-grade lying on the dumps; but with suitable ruduction-works and transportation facilities, the output would rapidly increase.

**Acquisition.**—R. H. Fisher, Louis McLane, and I. W. Chatfield, all Aspen, owners; claim (fractional) situated on Aspen Mountain, Roaring Fork district, one and one-half miles from Aspen; located in January, 1881; vein a fissure fourteen feet wide, containing galena in a spar gangue, milling, when sorted, thirty per cent lead and twenty-two ounces silver per ton; developed by a tunnel 170 feet in length and some other workings.

**Alcyon.**—B. S. Sowle and Tingley S. Wood, both Leadville, and J. D. McCarthy, Ashcroft, owners; claim 1500x300 feet; situated on Pearl Mountain, Elk Mountain district, six miles from Ashcroft; located in 1881; vein a fissure from three to twelve feet wide, pay streak from six to twenty-two inches, containing brittle and ruby silver, assaying from 300 to 10,000 ounces silver per ton, in a quartz gangue; developed by a drift on the vein fifty feet long.

**Arthur and Scottish Chief.**—John M. Price and Mrs. J. A. Kinney, both Atchison, Kas., and D. M. Swan and others, Leavenworth, Kas., owners; claims 1500x300 feet each; situated at South Independence, Independence district, six miles from Sparkill; located in 1880; veins both fissures from two to seven feet in width, pay streaks from six to twenty-two inches, containing gold and silver quartz, assaying one and one-fourth ounce gold and fifty ounces silver per ton; developed by a tunnel ninety-eight feet in length.



**Asia Queen.**—James Miller, P. Mackey, W. B. Root, C. H. Jacobs, and James McPherson, all Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Fork district, one-fourth mile from Aspen; located in 1881; vein a contact four feet wide, containing lime carrying galena; developed by a shaft 100 feet deep and a tunnel forty-five feet long; output fifty tons.

**Aspen Mammoth Group.**—J. C. H. Grabill, Buena Vista, and Mrs. Jas. McLoughlin and Miss Phelps, both Aspen, owners; group comprises the Aspen Mammoth, Pleasant View, Cupel, and White lodes, 1500x300 feet each; situated on Aspen Mountain, Roaring Fork district, three-fourths mile from Aspen; located in 1880; veins all contacts from two to six feet wide, containing spar carrying galena, which assays twenty-two ounces silver per ton; developed by three tunnels from thirty to seventy-five feet in length, one twenty-foot shaft, and one fifty-foot drift.

**Aspen Reduction-works.**—John Sampson, P. J. Cunningham, Martin Sullivan, and others, Leadville, owners; works situated at Aspen; main building 60x100 feet; containing Cornish Rolls, six Jigs, Tasker Pulverizer, Dodge Crusher, etc., motive power supplied by a forty-five-horse-power engine; capacity sixty tons per day (twenty-four hours).

**Beecher Group.**—J. P. Watkins, C. R. Johnson, A. W. Johnson, and B. H. Lumley, all Ashcroft, owners; group comprises the Beecher, Index Nos. 1 and 2, Jay Bird, Old Dominion, Sam Boss, Last Chance, and Little Annie lodes, 1500x300 feet; situated on the west slope of Vermont Hill, Columbia district, twelve miles from Ashcroft; located in 1882; veins all fissures from two and one-half to four feet in width, containing quartz, galena, gray copper, and brittle silver, assaying from twenty to seventy ounces silver per ton; developments—assessment work.

**Belle of La Crosse Group.**—John B. Brooks, Wm. C. Davis, Joseph Ehringer, and W. H. Covert, all Ashcroft, owners; group comprises the Belle of La Crosse, Wabashaw Chief, and Manatoka lodes, 1500x300 feet each; situated on Pearl Pass, near Pearl Mountain, Columbia district, six miles from Ashcroft; located in 1881; veins all fissures four feet wide, pay streaks eight inches, containing quartz with brittle silver and silver glance, assaying 120 ounces silver per ton; developed by three shafts twenty-five feet deep each.

**Black Wolf.**—John L. Davenport, A. J. Varney, and T. H. Medoris, all Aspen, owners; claim 1500x300 feet; situated on Maroon Creek, Elk Mountain district, seven miles from Gothic; located in 1882; vein a fissure two and one-half feet wide, containing quartz with galena and gray copper, assaying from 50 to 500 ounces silver per ton; developed by one tunnel fifteen feet long.

**Blue Jay.**—G. W. Triplett, Daniel Croft, James Brown, David Bowman, all Aspen, owners; claim 1500x300 feet; situated in Queen's Gulch, Roaring Fork district, two and one-half miles from Aspen; located in 1882; vein a contact, from two to four feet wide, pay streak from six to twelve inches, containing galena and copper, assaying forty-five ounces silver per ton, in a lime-rock gangue; developed by a tunnel seventy-five feet long.

**Bonnie Belle.**—J. M. Daniel, Chas. J. Moore, and Thos. Bracker, all Leadville, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district; patented in May, 1881; vein a fissure four feet wide, containing galena, assaying ninety-two ounces silver per ton, in a lime and spar gangue; developed by two tunnels aggregating eighty feet in length.

**Brandon.**—Jason E. Freeman, Aspen, owner, claim 1500x300 feet; situated in Conundrum Gulch, Columbia district, eleven miles from Aspen; located in 1881; vein a fissure four feet wide, pay streak six inches, containing galena and copper, assaying fifteen ounces silver and three-tenths ounce gold per ton, in a lime-rock gangue; developed by a thirty-foot tunnel.

**Broadway.**—G. W. Thatcher, R. H. Fisher, and others, Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one and one-fourth miles from Aspen; located in 1881, and in process of patent; vein a fissure, fourteen feet wide, pay streak from four to thirty inches, centaining galena assaying thirty per cent lead and twenty-two ounces silver per ton, in a lime-rock gangue; developed by a shaft forty-five feet deep and a drift 108 feet long.

**Brooks Smelter.**—John B. Brooks and Geo. Bethune, both Ashcroft, and Lewis Weinel, Hannibal, Mo., owners; office Ashcroft; building (frame) 45x40 feet; situated at Ashcroft, containing a Water-jacket Furnace, Blake Crusher, Cornish Rolls, Roaster, and Pulverizer; motive power supplied by a twenty-horse-power engine, in connection with which is a sampling-works; capacity sixty tons per day (twenty-four hours).

**Burro and Grand View.**—Chas. Green, G. H. Lawrence, James Lyons, Wm. Crane, Fred. Westletorn, and Chas. W. Durand, all Aspen, and Mark Dills, Leadville, owners; Burro 1500x150 feet and Grand View 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one and one-half miles from Aspen; located in 1880; vein a contact two feet wide, containing spar with copper and carbonates of lead, milling, when sorted, thirty per cent lead and seventy-five ounces silver per ton; developed by a sixty-foot shaft and a ten-foot drift.

**Cæsar.**—G. W. Thatcher and Mary E. Thatcher, both Aspen, owners; claim 975x300 feet; situated in Ophir Gulch, Roaring Forks district; located in 1881, and in process of patent; vein a fissure six feet wide, containing spar with galena and chlorides, assaying seventy ounces silver per ton; developed by a forty-foot shaft, with a drift from shaft forty-five feet long, and a tunnel 240 feet long; output thirty tons.

**Camp-bird and Iowa Chief.**—Chas. W. Durand, James Lyons, Charles Green, Wm. Crann, Frederick Westletorn, all Aspen, and G. H. Lawrence, Wisconsin, owners; claims 1500x300 feet each; situated on the summit of Aspen Mountain, Roaring Forks district, one and one-half miles from Aspen; located in 1880, and patented; veins both fissures from two to four feet in width, containing spar, sulphurets, and galena, the first-class ore milling, when sorted, 335 ounces, the second-class 159 ounces, and the third-class 100 ounces silver per ton; developed by two tunnels 75 and 240 feet in length and six shafts from ten to sixty feet in depth; output 100 tons.

**Captain Brooks.**—(See I. X. L. and Captain Brooks.)

**Captain Matthews.**—P. B. Matthews and Geo. Fields, both Chicago, Ill., and Chas. H. Fields, Aspen, owners; claim 1500x300 feet; situated in Conundrum Gulch, on West Castle Creek, Columbia district, fourteen miles from Aspen; located in 1881; vein a contact three feet wide, containing carbonates of copper in a lime-rock gangue, milling, when sorted, eight per cent copper and forty ounces silver per ton; developed by a fifteen-foot shaft and a drift on the vein twenty-two feet long.



**Castle Peak Group.**—Thirteen claims, situated on Slate Mountain, near Tam o' Shanter and Yellow Boy properties; veins all fissures from one to six feet wide, pay streaks from five to twenty inches, containing lead and copper carbonates and galena, in a quartz gangue; developed by a tunnel on each claim from 25 to 125 feet in length, with some other workings, and promising fairly.

**Castle Rock Mining Company (The).**—Incorporated under the laws of Colorado in February, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, R. E. Groves, Dubuque, Ia.; vice-president, Harvey Young, Colorado Springs; secretary, A. T. Butler, Aspen; treasurer, F. E. Dow, Colorado Springs; general manager, J. E. Freeman, Aspen; office Aspen; owns the Centennial Group, comprising fifteen lode claims and one tunnel site, covering 100 acres of surface ground; situated in Queen's Gulch, Highland district, and in process of patent; veins all fissures from six to thirty-two inches wide, containing galena and gray copper in a lime and spar gangue, milling, when sorted, from 50 to 150 ounces silver per ton; Centennial developed by a 250-foot tunnel, and the others by tunnels from 25 to 150 feet in length, and some other workings; output 100 tons.

**Champion Group.**—Chas. W. Durand, Aspen, Mark Dills, M. E. Corbett, Thos. Corbett, and Michael Welch, all Leadville, owners; group comprises the Champion, Silver Glance, Imperial Spar, Silver Gem, and Monarch lodes, 1500x300 feet each; situated on the east side of Conundrum Gulch, or West Castle Creek, Roaring Forks district; located in 1881; veins all fissures, containing galena, gray copper, with some silver bromides and copper and silver glance, which assay 279 ounces silver per ton, in a lime and quartz gangue.

**Chance.**—J. C. Eames, Peter Riley, and W. B. Mayham, all Aspen, owner; claim 1500x300 feet; situated near the Tam O'Shanter mines, four and one-half miles from Ashcroft; located in 1880; vein a fissure, four feet wide, pay streak from six to eight inches, containing galena, assaying 175 ounces silver per ton, in a quartz gangue; developed by two shafts twenty feet each and two tunnels twenty-five and thirty feet in length.

**Chicago.**—A. D. Hinkle and Geo. Freeland, both Buena Vista, and C. J. Colburn, Aspen, owners; claim 1500x300 feet; situated on Hogan's Peak, Columbia district, three-fourths of a mile from Ashcroft; located in 1880; vein a fissure, four feet wide, containing quartz and galena, assaying eighteen per cent lead and twelve ounces silver per ton; developed by two shafts twelve and twenty-two feet in depth.

**Chrysolite.**—Geo. Bethune, John B. Brooks, and L. H. Brooks, all Ashcroft, owners; claim 1500x300 feet; situated on Aspen Mountain, adjoining the Spar mine, Roaring Forks district, at Aspen; located in 1880; vein a contact, from three to four feet in width, pay streak six inches, containing oxide of lead, assaying thirty per cent lead and from 50 to 150 ounces silver per ton, in a lime-rock gangue; developed by a shaft twenty-eight feet deep.

**Claflin.**—J. C. Eames and George Marshall, both Aspen, owners; claim 1500x300 feet; situated on Rock Creek, Columbia district, thirty-five miles from Aspen; located in 1882; vein a fissure, twelve feet wide, containing spar and galena, assaying fifty per cent lead and fifteen ounces silver per ton; developed by one twenty-five-foot tunnel.

**Climax Group.**—Wm. O'Brien, J. W. Nugent, and N. H. Russell, all Aspen, owners; group comprises the Climax, Wilmington, Eclipse, Hard Rustle, Idle-wild, Bill Nugent, Eva, and Silver Queen, 1500x300 feet each, except the Hard Rustle, 1500x150; situated on Richman Hill, Highland district, six miles from Aspen; located in 1881; veins all fissures, from three to six feet in width, pay streaks from one to thirty-two inches, containing galena and copper in a lime-rock gangue, milling, when sorted, thirty per cent copper and thirty-five ounces silver per ton; Climax developed by a tunnel on the vein eighty-five feet long, Wilmington by three tunnels, forty, fifty-five, and sixty feet in length, Hard Rustle and Idle-wild by a tunnel 235 feet in length, and others by assessment work; output 100 tons.

**Colorado Central.**—W. H. Kingsbury, Leadville, John Burk and John Bennett, both Aspen, owners; claim covers seven acres; situated in Ophir Gulch, Roaring Forks district, three miles from Aspen; located in 1881, and in process of patent; vein a contact, four feet in width, containing spar with galena and gray copper, assaying fifty ounces silver per ton; developed by a seventy-five-foot incline and some other workings; output forty tons.

**Columbus Group.**—D. J. Hopkins and W. L. Hopkins, both Aspen, and E. A. Buck, New York City, owners; group comprises the Columbus, Monitor, North Star, and Float lodes, 1500x300 feet each; situated in Cooper's Camp, Columbia district; located in 1880, and in process of patent; vein a fissure, fifteen feet wide, pay streak from four to twenty-two inches, containing iron and spar carrying galena, assaying from twelve to thirty ounces silver per ton; Columbus developed by a tunnel forty feet long, Monitor by a tunnel twenty feet long, and Float by a tunnel thirty feet long.

**Concho.**—Julius and F. F. Reimer and Theodore Kreatsch, all Ashcroft, owners; claim 1500x300 feet; situated on Pearl Mountain, Columbia district; located in 1881; vein a fissure, three feet wide, pay streak fourteen inches, containing galena with some silver glance in a lime-rock gangue; developed by a tunnel twenty feet long.

**Coxhead and Collingwood.**—R. R. Teller, Aspen, James Feeley, Ashcroft, and others, owners; Coxhead 1500x150 feet and Collingwood 1500x300 feet; situated on Unexpected Mountain, Columbia district, twelve miles from Aspen; located in 1881; veins both fissures, from two and one-half to six feet in width, containing spar with galena and gray copper, assaying forty-eight ounces silver per ton; developed by a shaft twenty feet deep.

**Cummings.**—Jacob Sanders, Leadville, and others, owners; claim 1500x300 feet; situated on the Conundrum Gulch slope of Eureka Mountain, West Castle district, thirteen miles from Aspen; vein a fissure three feet wide, pay streak from ten to thirty inches, containing quartz and galena with some ruby silver, milling, when sorted, from 100 to 220 ounces silver per ton; developed by a tunnel sixty-five feet long, a shaft forty feet deep, and a fifteen-foot open cut; output fifty tons.

**Edison.**—Wm. H. Lawrence, Milwaukee, Wis., John Burnett, Illinois, Edward Bock, Leadville, and Charles Green and James L. Lyons, both Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Fork district, one and one-half miles from Aspen; located in 1880; vein a contact, varying in width, pay streak five inches, containing galena, assaying twenty-five ounces silver per ton, in a quartz gangue; developed by two shafts 30 and 100 feet in depth.

**Excelsior.**—I. P. Watkin, C. R. Johnson, A. W. Johnson, B. H. Lumley, W. M. Jackson, and others, Ashcroft, owners; claim 1500x300 feet; situated on Maroon Creek, Columbia district, seven miles from Gothic; located in 1882; vein a fissure four feet wide, pay streak from six to thirty inches, containing galena and gray copper, with some ruby silver, in a quartz gangue; developed by a shaft twelve feet deep.



**Fannie E. Vance.**—John W. O'Connell, Ashcroft, and Lou C. Leonard, Leadville, owners; claim 1500x300 feet; situated on the west slope of the Taylor Range, Columbia district, at Ashcroft; located in 1880; vein a contact from four to eight feet wide, containing carbonates and galena, assaying eighteen per cent lead and from thirty to seventy ounces silver per ton, in a quartz gangue; developed by a shaft twenty-two feet in depth and a tunnel seventy-five feet in length.

**Farwell Consolidated Mining Company (The).**—Incorporated under the laws of New York, in 1879; president, W. P. Dickerman; secretary and treasurer, W. H. Philips; general manager, Robert Boraem—all Leadville; offices Rooms 2 and 3 Quincy Block, Leadville, Colo.; owns the Independence Group, fifty-one locations, viz., the Independence, Nos. 1, 2, 3, and 4, Last Dollar, Legal Tender, Bennington, Choler, Sheba, Friday, Mammoth, Dolly Varden, Gatton, Minnie, Mount Hope, Golden Champion, and others; situated in Independence Gulch, at Sparkill, Independence district; located in 1878-9; veins all fissures from one to six feet wide, containing iron and copper pyrites, galena, and zinc blende, in a gold-bearing quartzose gangue, milling, when sorted, from one-half to two and one-half ounces gold per ton; developments—one tunnel 400 feet long, with drifts, shafts, winzes, etc., and considerable improvements.

And owns two stamp-mills, containing fifteen and thirty Stamps, with the necessary motive power; situated in Independence Gulch, adjoining the mines.

**Forsaken Group.**—Edward Cain, Leadville, W. H. Bush, J. L. Routt, Frank Osbiston, W. S. Cheesman, and J. S. Duff, all Denver, owners; group comprises the Forsaken, Spar, Spar No. 2, and Shamus O'Brien lodes, 1500x300 feet each; situated on Castle Mountain, Columbia district, four and one-half miles from Ashcroft; located in 1880; veins all fissures from three to eight feet wide, pay streaks from three to twelve inches, containing galena and gray copper, assaying from 40 to 100 ounces silver per ton, in a quartz gangue; developed by five shafts from ten to twenty feet in depth and forty feet of drifts and open cuts.

**Fulton Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1880; capital stock $1,250,000, in 125,000 shares of $10 each, non-assessable; president, Edward Dunscombe; vice-president, I. W. Chatfield; secretary, Daniel Sayer; treasurer, Wm. J. Wilson; office Leadville; owns J. C. Johnson, Chatfield, and Smuggler, 300x1500 feet each; situated in the Roaring Forks district, one mile from Aspen; located in 1879, and patented in 1882; vein a fissure four feet wide, containing galena in a quartz gangue; developed by one tunnel 150 feet long, with some other workings.

**Garibaldi Group.**—J. D. Davis, Wm. E. Bolton, and Thomas Wilkinson, all Ashcroft, owners; group comprises the Garibaldi, Garibaldi Extension, Birthday, and Birthday Extension lodes, 1500x300 feet each; situated in Conundrum Gulch or West Castle Creek, Columbia district; located in 1882; veins all fissures from three to five feet in width, containing gray copper and copper glance, assaying seventeen per cent copper and forty-nine ounces silver per ton, in a quartz gangue; developed by a tunnel ninety feet long.

**Gay Coal Bank.**—Wm. Gay, John Murray, John Hardenburg, and E. T. Butler, all Aspen, owners; claim covers 400 acres; situated five miles

south of the confluence of the Roaring Forks and Rock Creek; containing two strata, or veins, of semi-bituminous coal, six and seven feet in thickness; developed by two twelve-foot-face open cuts.

**Gay Girl.**—A. D. Hinkle and G. W. Freeland, both Buena Vista owners; claim 1500x300 feet; situated on Richmond Hill, Highland district, located in May, 1880; vein a contact twelve feet wide, containing spar and galena, with some carbonates, assaying thirty-three ounces silver per ton; developed by a twenty-five-foot shaft and a thirty-five-foot tunnel.

**General Shields.**—Martin Sullivan, Morris C. Hayes, John Walsh, E. Farrell, and Patrick Fitzgerald, Leadville and Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, at Aspen; located in 1879, and patented in 1882; vein a contact five feet wide, containing galena and carbonates in a spar gangue, milling, when sorted, twenty per cent lead and twenty-five ounces silver per ton; developed by a tunnel 100 feet long, a fifty-five-foot shaft, with a fifty-foot drift from the bottom of the shaft, and a forty-five-foot incline on the vein, with some other workings; output fifty tons.

**Gertrude S.**—J. C. Eames, Geo. Marshall, and J. B. Orr, all Aspen, owners; claim 1500x300 feet; situated in Aspen Gulch, Boaring Fork distirct, two and one half miles from Aspen; located in 1881; vein a fissure six feet wide, and pay streak ten inches, containing gray and yellow copper, assaying ten per cent copper and twenty ounces silver per ton, in a lime-rock gangue; developed by two tunnels 77 and 300 feet in length and a forty-foot incline.

**Gracie Group.**—Martin Sullivan, Chas. A. Wyman, and Chas. Davis, all Leadville, owners; group comprises the Gracie, 1200x300 feet; Occident, Terry, and Reno lodes, 1500x300 feet each; situated in Conundrum Gulch, Columbia district, sixteen miles from Aspen; located in 1880; veins all fissures from two to twelve feet wide, pay streaks from two to ten inches, containing galena and sulphurets, assaying from 50 to 300 ounces silver per ton, in a lime-rock gangue; developed by four shafts from eighteen to thirty-three feet in depth and a tunnel thirty-five feet long; output ten tons.

**Grand Prize Group.**—Owned by Chas. W. Durand, H. B. Cowenhoven, Edward Wilson, Louis Johnson, David Brown, and J. R. Williams (the latter only in the Branch Mint); group comprises the Grand Prize, Oro, and Branch Mint lodes; situated on the west side of Ophir Gulch, Roaring Forks district, three miles from Aspen; located in 1881; veins all contacts from two to four feet wide, pay streaks from six to fifteen inches, containing spar, galena, and gray copper, milling, when sorted, ten per cent copper and ninety ounces silver per ton; developed by four shafts from fifteen to fifty feet in depth and three tunnels from 30 to 120 feet in length.

**Grand Union Group.**—Martin Sullivan, Jas. P. O'Brien, P. J. Cunningham, and Jesse Honley, all Leadville, owners; group comprises the Grand Union, Little Jessie, and Colorado lodes, 1500x300 feet each; situated in Conundrum Gulch, or West Castle Creek, Columbia district, twelve miles from Aspen; located in 1880; veins all fissures, from three to fourteen feet wide, pay streaks from six to twelve inches, containing galena, gray copper, and some sulphurets, assaying from 50 to 150 ounces silver per ton, in a lime-rock gangue; developed by two open cuts twelve feet long each and a tunnel fifty feet long

**Green Monster and Azurite Mining Company (The).**—Incorporated under the laws of Colorado, November 1, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Geo. Hibben, Chicago; vice-president and secretary, J. W. Vergin; treasurer, James Streeter—both Leadville; office 224 Harrison Avenue, Leadville; owns sixteen claims, covering 165 acres; situated twenty-five miles from Red Cliff, Lime Creek district; located in 1879; veins all contacts, varying in width, and containing carbonates, gray copper, and horn-silver, in a lime-rock gangue, milling, when sorted, from 100 to 200 ounces silver per ton, and azurite, milling, when sorted, sixty-four per cent copper and five ounces silver per ton; developed by sixteen shafts from 30 to 100 feet in depth and two tunnels sixty and seventy-five feet in length, with some other workings, and some improvements.



**Green Mountain Group.**—G. A. Jackson and J. B. Thompson, both Crested Butte, and John H. Bowman, Gunnison City, owners; group comprises the Green Mountain, Midnight Bell, Badger, Home-stake, Colorado Central, and Montezuma lodes, 1500x300 feet each; situated on West Castle Creek, or Conundrum Gulch, Columbia district, sixteen miles from Crested Butte; located in 1881; veins all fissures, from three to eight feet in width, pay streaks from five to twenty inches, containing quartz and galena, with silver glance and gray copper, milling, when sorted from 50 to 1,000 ounces silver per ton; developed by three tunnels from thirty to sixty feet in length and three shafts from twenty to forty feet in depth; output forty tons.

**Gray Eagle Group.**—Samuel Kelly and Charles Bovard, both Ashcroft, and Wm. Linn, Leadville, owners; group comprises the Gray Eagle, Lee, and Tama Boy lodes, 1500x300 feet each; situated on the west slope of Slate Mountain, Columbia district, four miles from Ashcroft; located in 1880; veins all fissures, from three to four feet wide, pay streaks from one to eight inches, containing galena, assaying thirty-five per cent lead and forty ounces silver per ton, in a quartz gangue; developed by one shaft twenty feet in depth and two tunnels thirty and fifty feet in length.

**Gunnison Prince.**—Thos. Combs, B. L. Soule, W. F. Coxhead, and H. Snider, all Ashcroft, owners; claim 1500x300 feet; situated on Slate Mountain, Columbia district, two and one-half miles from Ashcroft; located in 1880; vein a fissure, three feet wide, pay streak from six to fifteen inches, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by one tunnel thirty-five feet long.

**Hamilton Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, S. D. Bowker; treasurer, L. K. Thacher; secretary, Theo. S. Case—all Kansas City; superintendent, August Schott, Independence; offices Leadville and Kansas City; owns Pride of the West placer, 160 acres; situated in Independence Gulch, three miles from Independence, Independence district, and patented; developments—two shafts and several buildings, and on which is situated one patented lode claim, 300x1500 feet, viz., Thacher; vein a fissure, dipping about forty-five degrees, and four feet wide, with a vein-matter of quartz and an ore of free-milling gold quartz, the pay streak varying from one-half to two inches in width, on which two assays showed seven and ten ounces silver and one and one-fifth and eight-tenths ounces gold per ton; developed by one seventy-seven-foot incline shaft and one sixty-foot shaft; and owns three claims, viz., Case, Champion, and Ocean Wave, adjoining the placer, 300x1500 feet each; the first developed by one thirty-foot tunnel, the second by a shaft seventy-five feet deep, and the third by one tunnel about seventy-five feet long, all showing mineral similar in quality and quantity to the Thacher ore.

**Hell-gate.**—L. W. Worthington, Ashcroft, and J. M. Cook, Chas. B. Heusner, and R. McNamara, all Leadville, Colo., owners; claim 1500x300 feet; situated at the head of Maroon Creek, Columbia district, six miles from

Gothic; located in 1882; vein a fissure four feet wide, pay streak from six to thirty-two inches, containing quartz with brittle silver and chlorides, assaying from 50 to 200 ounces silver per ton; developed by a shaft forty-eight feet in depth.

**Highland Chief.**—C. H. Smith, Mount Pleasant, Iowa, owner; claim 1500x300 feet; situated on the south slope of Slate Mountain, Columbia district, four miles from Ashcroft; located in 1880; vein a fissure thirty feet wide, pay streak from twelve to twenty-two inches, containing quartz, galena, and gray copper, assaying 278 ounces silver per ton; developed by a shaft twenty-five feet deep and a tunnel forty feet long.

**Hunter's Pride Group.**—G. W. Thatcher, Aspen, and J. A. Thatcher, Central City, owners; group comprises the Hunter's Pride, Ellsworth, and Copperopolis lodes, covering twenty-six acres; situated on Aspen Mountain, Roaring Forks district, one and one-half miles from Aspen; located in 1880, and patented in 1882; veins all fissures, from one to four feet wide, containing galena and chlorides in a spar gangue, milling, when sorted, from 40 to 120 ounces silver per ton; developed by a tunnel 168 feet long and a shaft thirty feet deep.

**I. X. L. and Captain Brooks.**—John. B. Brooks, Wm. Cope, and Alexander Collyer, all Aspen, owners; claims 1500x300 feet each; situated on the south side of Conundrum Gulch, Columbia district,four miles from Ashcroft; located in 1880 and 1881; veins both fissures, four and ten feet in width, respectively, pay streaks two and one-half and eighteen inches, containing quartz and silver glance, assaying fifty-two ounces silver per ton; developed by two shafts twenty and twenty-two feet in depth.

**Iron Silver.**—J. C. Eames, Aspen, owner; claim 1500x300 feet; situated in Rock Creek, Columbia district, thirty-five miles from Aspen; located in 1882; vein a contact from 30 to 100 feet in width, through which is scattered galena and lead carbonates, assaying thirty per cent lead and from four to seven ounces silver per ton; developed by a tunnel twenty feet long.

**J. P., Jr.**—Peter Lonergan, J. P. Flynn, James Sullivan, James Goodwin, and Chas. Hughes, all Ashcroft, owners; claim 1500x300 feet; situated on the north-east slope of Slate Mountain, Columbia district, four and one-half miles from Ashcroft; located in 1882; vein a contact, five feet wide, pay streak eleven inches, containing galena and copper carbonates in a quartz gangue; developed by one twelve-foot open cut.

**Jackson.**—G. A. Jackson and John B. Thompson, both Crested Butte, and John H. Bowman and F. P. Tanner, both Gunnison City, owners; claim 1500x300 feet; situated in the upper rim of Conundrum Gulch, Columbia district, sixteen miles from Crested Butte; located in 1881, and in process of patent; vein a fissure, sixteen feet wide, pay streak from eight to twenty-two inches, containing quartz, galena, and black oxide of copper, assaying fifty per cent copper and sixty ounces silver per ton; developed by a twenty-foot tunnel and a thirty-foot open cut.

**Jenny Lind.**—N. B. Nelson, Chas. O. Pierson, Nelson Swanson, David Brown, and H. P. Cowenhoven, all Aspen, owners; claim 1500x300 feet; situated on the west slope of Aspen Mountain, Roaring Forks district, three miles from Aspen; located in 1880; vein a contact, four to twenty-two inches wide, containing spar, galena, and chlorides, assaying 150 ounces silver per ton; developed by a tunnel 200 feet long and a shaft forty feet deep, with some other workings.



**Jim Fisk.**—D. B. Santry, Ashcroft, Frank, Henry, and T. C. Dodge, T. A. Santry, and R. W. McDonald, all Leadville, owners; claim 1500x300 feet; situated at the head of Traveler's Gulch, Columbia district, five miles from Ashcroft; located in 1882; vein a fissure, six feet wide, containing quartz carrying silver, assaying twenty-seven ounces silver per ton; developed by a ten-foot shaft.

**Jim Fisk and John Bull.**—M. D. Hammaker, Ashcroft, owner; claims 1500x300 feet each; situated on West Castle Creek, Columbia district, ten miles from Ashcroft; located in 1881; vein a fissure, three feet wide, pay streak nine inches, containing galena, with brittle and wire silver, assaying from 100 to 235 ounces silver per ton, in a quartz gangue; developed by a twelve-foot shaft and a thirty-foot tunnel.

**Josephine.**—J. P. Watkins, John Overman, and John Bolton, all Ashcroft, owners; claim 1500x300 feet; situated on the south slope of Slate Mountain, Columbia district, three and one-half miles from Ashcroft; located in 1880; vein a fissure thirty inches wide, and pay streak fourteen inches, containing galena, assaying seventy-six ounces silver per ton, in a quartz gangue; developed by a shaft fifteen feet deep.

**Keystone.**—Norman Strait, J. E. Slagle, R. B. Hathaway, and James Harkins, all Aspen, owners; claim 1500x300 feet; situated on Spar Ridge, Roaring Forks district, two miles from Aspen; located in 1880; vein a fissure, varying in width, pay streak twenty inches, containing spar and galena, assaying forty ounces silver per ton; developed by two shafts forty and ninety-six feet in depth; output twenty-five tons.

**Last Chance and Amazon.**—Owned by the Prospect Mining Company, D. B. Santry, Ashcroft, T. C. Dodge, Francis, Henry, and C. H. Lyke, all Leadville; claims 1500x300 feet each; situated in Difficult Creek, five miles from Ashcroft, Columbia district; located in 1881 and 1882; veins both fissures, three and five feet in width, respectively, pay streaks four and eighteen inches, containing quartz carrying gold and silver, assaying an average of fifteen per cent copper, two ounces gold, and eleven ounces silver per ton; Last Chance developed by a shaft twenty-five feet deep, and Amazon by a shaft fifty-six feet deep.

**Last Dime.**—300x1500 feet; situated on the south side of Independence Gulch, at Independence, Roaring Forks district; located in July, 1879; owners J. D. Farwell, Chicago, W. Dagenhardt, Durango, and Adolph Ross and John Swift, both Denver; vein a fissure from three to six feet wide, containing gold and silver bearing quartz, with some copper on the hanging-wall, gold-bearing quartz on the foot-wall, and gray copper and iron pyrites in the center, assaying $100 per ton; developed by two tunnels forty and thirty feet long, respectively.

**Last Dime.**—Lou. C. Leonard, Leadville, and John W. O'Connell, Thos. Smitham, and Wm. Warner, all Ashcroft, owners; claim 1500x300 feet; situated on Conundrum Mountain, Columbia district, three miles from Ashcroft; located in 1881; vein a fissure eight feet wide, containing quartz with galena and iron and copper pyrites, assaying thirteen per cent copper and twenty ounces silver per ton; developed by a tunnel fifty feet long.

**Laurie.**—F. I. Smith, A. E. Jones, and Geo. Stark, all Fairplay, owners; claim 1500x300 feet; situated on Copper Mountain, Columbia district, one and one-half miles from Ashcroft; vein a fissure three feet wide, pay

streak from four to ten inches, containing galena, assaying twelve per cent lead and fifty ounces silver per ton, in a quartz gangue; developed by a tunnel forty feet long.

**Levicy and High Point.**—L. W. Worthington, G. Goudy, F. Mallory, and J. Mallory, all Ashcroft, owners; claims 1500x300 feet each; situated at the head of Tellurium Creek, Columbia district, nine miles from Ashcroft; located in 1882; veins both fissures four feet wide, pay streaks from six to twenty inches, containing galena, sulphurets, and chlorides, assaying from 100 to 300 ounces silver per ton, in a quartz gangue; developed by a sixteen-foot open cut on the vein and an eighteen-foot shaft.

**Libbie Belle.**—J. E. Freeman and others, Aspen, owners; claim 1300x300 feet; situated on Spar Ridge, Roaring Forks district, one and one-half miles from Aspen; located in 1881; vein a contact four feet wide, containing galena and sulphurets in a lime-rock gangue; developed by two tunnels twenty-five and seventy feet in length and a thirty-foot shaft.

**Little Anna.**—A. D. Hinkle and G. W. Freeland, both Buena Vista, owners; claim 1500x300 feet; situated on Richmond Hill, Highland district, six miles from Ashcroft; located in 1880; vein a fissure two feet wide, pay streak from four to eight inches, containing spar, galena, and gray copper, assaying eighty ounces silver per ton; developed by a fifteen-foot shaft and a twelve-foot open cut.

**Little Baltimore Group.**—Edward Cain, James H. Cowen, C. F. Saunders, and C. B. Gentry, all Ashcroft, Colo., owners; group comprises the Little Baltimore, Little Baltimore No. 2, and Gem, 1500x300 feet each; situated on Slate Mountain, Columbia district, four and one-half miles from Ashcroft; located in 1882; vein a contact from four to six feet in width, containing galena and gray copper, assaying from twenty to eighty ounces silver per ton, in a quartz gangue; developed by three shafts ten feet deep each and three open cuts ten feet long each.

**Little Birdie, Little Giant, Last Chance, and Johnny.**—Four claims, 300x1500 feet each; situated between Grizzly and Graham Gulches, on the Continental Divide, South Independence district; owners Arthur Chanute, D. V. Williams, A. B. McLeary, and Charles Driver, all Leadville; veins all fissure, varying in width, and containing galena, in a spar gangue; developments—four shafts from fifteen to twenty feet deep and sixty feet of tunnels and inclines.

**Little Daisy.**—J. B. Thomasson and G. A. Jackson, both Crested Butte, and Luke Sells and J. A. McDonough, both St. Louis, owners; claim 1500x300 feet; situated in Conundrum Basin, Columbia district, sixteen miles from Crested Butte and eight miles from Ashcroft; located in 1881; vein a fissure from two to four feet wide, pay streak from six to thirty inches, containing quartz with silver glance and gray copper, assaying 250 ounces silver per ton; developed by a shaft thirty-six feet deep and open cut twenty feet long; output thirty tons.

**Little Dudley Group.**—Charles Field and Mackey & Mason, all Aspen, and D. D. Fowler, Macon, Mo., owners; group comprises the Little Dudley, Colonel Frank, and Little Mason lodes, 1500x300 feet each; situated on Fowler Mountain and in Field's Gulch, South Independence district; four miles from Independence; located in 1882; veins are fissures from six to eight feet wide, pay streaks from six to twenty-two inches, containing gold-bearing quartz and galena, assaying three ounces gold and forty ounces silver per ton; developed by three open cuts, thirteen, fifteen, and twenty feet long each.



**Little Emma.**—D.B. Santry, Ashcroft, and Frank, Henry, and T. C. Dodge, T. A. Santry, and P. W. McDonald, all Leadville, owners; claim 1500x100 feet; situated in Traveler's Gulch, Columbia district, five miles from Ashcroft; located in 1881; vein a fissure three feet wide, pay streak six inches, containing silver-bearing quartz, assaying 600 ounces silver per ton; developed by a tunnel sixteen feet long.

**Little Hattie.**—I. Bedal and Jacob Ellison, both Sunshine, Colo., owners; claim 1500x300 feet; situated on West Castle Creek, Columbia district, eight miles from Ashcroft; located in 1880; containing five fissure veins from two to four feet in width, pay streaks from six to fourteen inches, containing quartz and galena, assaying thirty per cent lead and forty ounces silver per ton; developed by five shafts from ten to eighteen feet in depth.

**Little Jennie.**—George Bethune, Ashcroft, and Wm. B. Root, Aspen, owners; claim 1500x300 feet; situated in Sandy's Gulch, Columbia district, seven miles from Ashcroft; located in 1882; vein a fissure four feet wide, pay streak from three to nine inches, containing galena with brittle silver and iron, assaying three-tenths ounce gold and 120 ounces silver per ton, in a quartz gangue; developed by an open cut forty feet long.

**Little Mack.**—Charles Burns, James McPherson, and Charles Jacobs, all Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one-fourth mile from Aspen; located in 1879; vein a fissure twelve feet wide, pay streak from three to twelve inches, containing galena, assaying forty per cent lead and forty ounces silver per ton, in a spar gangue; developed by a shaft seventy feet deep.

**Little Nellie.**—D. D. Fowler, Aspen, owner; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one mile from Aspen; located in 1881; vein probably a fissure, five feet wide, pay streak twenty-six inches, containing galena, assaying fifty-six ounces silver per ton, in a spar gangue; developed by a tunnel seventy feet long and a shaft sixty-five feet deep.

**Little Rule.**—Henry Henderson, Joseph Diets, and Thos. Neeley, all Aspen, owners; claim 1500x300 feet; situated at the head of Ophir Gulch, Roaring Forks district, four miles from Aspen; located in 1880, and in process of patent; vein a fissure, four feet wide, containing quartz with galena and copper, milling, when sorted, fifty-six ounces silver per ton; developed by two tunnels of considerable length; output twelve tons.

**Lou C. Leonard.**—Lou C. Leonard, Leadville, John W. O'Connell, Peter Lonnergan, and B. L. Soule, all Ashcroft, owners; claim 1500x300 feet; situated on Slate Mountain, Columbia district, three miles from Ashcroft; located in 1881; vein a fissure, twelve feet wide, pay streak from five to eighteen inches, containing galena and black sulphurets, assaying from fifteen to twenty-five ounces silver per ton, in a quartz gangue; developed by a tunnel sixty feet in length.

**Lone Pine.**—T. B. McNeil, Aspen, and F. F. Corcoran, Hugo, owners; claim 1500x300 feet; situated in the Roaring Forks district, one-half mile from Aspen; located in 1879, and in process of patent; vein a contact, thirty-four feet wide, pay streak from four to thirty-two inches, containing spar and galena, milling, when sorted, forty per cent lead and twenty-five ounces silver per ton; developed by a shaft eighty feet deep, a cross-cut eighty-seven feet long, and a drift fifty feet long; operated by a twenty-five-horse-power engine; output 100 tons of ore.

**Lone Star.**—T. H. Medoris, W. E. Cole, James Phillips, and others, Aspen, owners; claim 1500x300 feet; situated in Conundrum Gulch, Roaring Forks district, twelve miles from Aspen; located in 1881; vein a fissure, from six to thirty-two inches, containing galena and gray copper, assaying from 30 to 200 ounces silver per ton, in a lime-rock gangue; developed by a tunnel twenty-five feet long and a shaft twelve feet deep.

**Lone Star.**—Michael Rooch, P. M. Gallagher, and Hugh Curran, all Ashcroft, owners; claim 1500x300 feet; situated at the head of Pine Creek and on Castle Peak Mountain, Columbia district, four miles from Ashcroft; located in 1880; vein a fissure, four feet wide, containing quartz, copper, and galena, assaying 100 ounces silver per ton; developed by a tunnel twenty feet long.

**Maroon Chief and Maroon Gem.**—J. C. H. Grabill, Buena Vista, and others, owners; claims 1500x300 feet each; situated on the second west fork of Maroon Creek, Columbia district, six miles from Ashcroft; located in 1880; vein a contact three feet wide, containing quartz through which is scattered copper pyrites, assaying twenty per cent copper, and two and one-half ounces gold per ton; developed by two tunnels thirty-five and sixty feet in length and two shafts fifteen and forty-five feet in depth.

**Mary and Edith Group.**—G. W. Thatcher and Chas. Johnson, both Aspen, and M. J. McNamara, Denver, owners; group comprises the Mary and Edith, Little Della, Honest Abe, and Tanner Boy lodes, 1500x300 feet each; situated on Aspen Mountain, Roaring Forks district, two and one half miles from Aspen; located in 1879, and in process of patent; veins all fissures from ten to thirty-two inches, containing galena and chlorides, assaying twenty per cent lead and twenty-five ounces silver per ton, in a spar gangue; developed by two shafts twenty and forty-five feet in depth, six tunnels from twenty to sixty feet in length, and two open cuts twenty feet long each.

**Marietta.**—(An extension of Mexico with similar characteristics); owned by C. R. and A. W. Johnson and S. Bush, all Ashcroft; (see Mexico and Mammoth).

**Mascott.**—John W. O'Connell, R. L. Soule, and Wm. Warner, all Ashcroft, and Lou. C. Leonard, Leadville, owners; claim 1500x300 feet; situated in Cooper's Camp, and on Taylor Peak, Columbia district, four miles from Ashcroft; located in 1882; vein a contact, varying in width, pay streak from eight to twenty inches, containing galena and gray copper, assaying from 100 to 200 ounces silver per ton, in a lime-rock gangue; developed by two tunnels eighteen and forty feet in length.

**Mexico and Mammoth.**—C. R. and A. W. Johnson, both Ashcroft, owners; claims 1500x300 feet each; situated on Vermont Hill, Columbia district, twelve miles from Ashcroft; located in 1882; veins both fissures three and four feet in width, respectively, pay streaks from six to twenty-two inches, containing quartz, galena, and brittle silver, assaying from twenty-five to fifty ounces silver per ton; developed by two shafts ten feet deep each.

**Midas.**—G. W. Triplett, Aspen, owner; claim 1500x300 feet; situated on Hunter's Creek, Roaring Forks district, three miles from Aspen; located in 1880; vein a contact four feet wide, pay streak eighteen inches, containing quartz and galena, assaying 150 ounces silver per ton; developed by shafts 50 and 100 feet in depth and a drift from the bottom of the latter shaft fifty-three feet long.

**Minneapolis Group.**—L. W. Worthington and Peter Carney, both Ashcroft, and Thos. J. Porter and J. M. McMichael, both Plattsburgh, Mo., owners; group comprises the Minneapolis, Alpine, Silver Islet, and Silver Wave lodes, 1500x300 feet each; situated at the head of Pine Creek, Columbia district, four miles from Ashcroft; located in 1880, and in process of patent; veins all fissures from four to six feet wide, pay streaks from six to twenty-four inches, containing galena, assaying thirty per cent lead and 100 ounces silver per ton, in a quartz gangue; developed by three shafts from fourteen to twenty-seven feet in depth and two tunnels sixteen and forty-eight feet in length.



**Minnehaha Group.**—Five claims, 1500x300 feet each, viz.: Minnehaha, Golden Rock, Little Robbie, and Old Grimes; situated in Independence Gulch, at Sparkill; veins all fissures, varying in width, and containing an ore similar to that in the Independence Group, in a quartz gangue; developments—mainly assessment work, but showing fairly.

**Minnie.**—Patrick Mulroony, Michael Roach, Geo. Trimble, and E. N. Hunter, all Leadville, owners; claims 1500x300 feet; situated at the head of Pennsylvania Creek, Columbia district, four miles from Ashcroft; located in 1880; vein a fissure three feet wide, pay streak ten inches, containing galena and copper, assaying 130 ounces silver per ton, in a quartz gangue; developed by a shaft thirty feet deep.

**Mollie Gibson.**—C. A. Hallam, Isaac Cooper, and Louis McLane, all Aspen, owners; claim 1500x300 feet; situated in the Roaring Forks district, at Aspen; located in 1880; vein a contact thirty feet wide, pay streak from six to twenty-two inches, containing spar and galena, assaying forty per cent lead and twenty-five ounces silver per ton; developed by two shafts thirty and forty-five feet in depth and a cross-cut 150 feet long.

**Mollie McGuire.**—J. C. Eames and Evans & Smith, all Aspen, owners; claim 1500x300 feet; situated in Sandy's Gulch, Columbia district, ten miles from Aspen; located in 1880; vein a fissure two feet wide, containing quartz, with galena, assaying twenty per cent lead and eighteen ounces silver per ton; developed by a twenty-two-foot tunnel.

**Monarch.**—C. R. Johnson, A. W. Johnson, and T. A. Wilkinson, all Ashcroft, owners; this claim is a part of a group with the Mexico and Mammoth, and developed through the same workings, with the same character of mineral.

**Montezuma.**—(See Tam O'Shanter and Montezuma Group.)

**Morning Star and Evening Star.**—Henry Reifsnyder and R. M. Smith, both Aspen, Colo., owners; claims 1500x300 feet each; situated on the west slope of Aspen Mountain, near the head of Ophir Gulch, Highland district, five miles from Aspen; located in 1879; vein a contact forty-five feet wide, pay streak from four to twenty-two inches, containing spar and silver chlorides, with some native and brittle silver, assaying eighty-eight and one-half ounces silver per ton; developed by a tunnel seventy-two feet long and a shaft twenty feet deep, both in mineral.

**Mountain Ranger.**—J. W. Deane, E. E. Shear, and J. R. and P. Mackey, all Aspen, owners; claim 700x300 feet; situated on Copper Mountain, Columbia district, six miles from Aspen; located in 1881, and patented in 1882; vein a fissure from three to four feet in width, containing spar and galena, assaying fifty ounces silver per ton; developed by a sixty-foot shaft and a tunnel 150 feet long.

**New York.**—C. Burns, Aspen, A. C. Gilman, Leadville, and M. Sweeney and K. Young, both Webster City, Ia., owners; claim 1500x300 feet;

situated at the head of Ophir Gulch, Roaring Forks district, three miles from Aspen; located in 1879, and patented in 1881; vein a contact six feet wide, pay streak from six to twenty inches, containing galena and gray copper with some brittle silver in a spar gangue, milling, when sorted, from 70 to 100 ounces silver per ton; developed by an incline on the vein seventy-five feet in length, two shafts 25 and 150 feet in depth, and 130 feet of drifts on the vein; output sixty tons, with a capacity to ship from ten to thirty tons per day.

**North American.**—L. M. Goddard and Major Dunning, both Leadville, owners; claim 1500x300 feet; situated on Columbia Mountain, Columbia district; located in 1880; vein a fissure fifteen feet wide, pay streak from ten to twenty inches, containing quartz carrying gold and copper, assaying from $50 to $300 per ton; developed by a shaft 100 feet in depth, with some other workings.

**North Texas Milling and Smelting Company (The).**—Incorporated under the laws of Texas, in October, 1882; capital stock $30,000, in 300 shares of $100 each, non-assessable; president, J. T. Rowland; secretary, T. J. Walker; treasurer, L. B. Edwards—all Gainsville, Tex.; general manager, T. P. Airheart, Leadville; offices Gainsville and Aspen; owns a smelting-works, situated at Aspen; main building 60x46 feet, containing Water-jacket Furnace, Dodge Crusher, Baker Blower, Cornish Rolls, and motive power supplied by thirty-five-horse-power engine; capacity forty tons per day (twenty-four hours). (This property has recently passed into other hands).

**O'Reiley Group.**—Peter O'Reiley, John C. Eames, and others, Aspen, Colo., owners; group comprises the O'Reiley, Forsaken, and Pride of Maroon lodes, 1500x300 feet each; situated in Maroon Gulch, near the head of Conundrum Gulch, fifteen miles from Aspen; located in 1882; veins all fissures from three to five feet in width, containing quartz with galena and copper, assaying twelve per cent copper and ninety-six ounces silver per ton; developed by a tunnel thirty-five feet in length and a twenty-foot open cut.

**Oneida.**—Julius Berg, Wm. Balderston, J. D. Moss, C. W. Palmer, C. Brennan, and W. W. Brennan, all Aspen, owners; claim 1500x300 feet; situated between Green's Gulch and Copper Hill, Highland district, five miles from Aspen; located in 1881; vein a contact from six to thirty-two inches wide, containing spar with galena and gray copper, assaying from 75 to 150 ounces silver per ton; developed by a tunnel 150 feet long and a thirty-foot drift.

**Osborn.**—Joseph E. McClure and H. C. Bostwick, both Alpine, B. L. Riggins, Swan City, L. H. Spilker, Leadville, and R. J. Davis, Ashcroft, owners; claim 1500x300 feet; situated in Conundrum Gulch, Columbia district, ten miles from Aspen; located in 1880; vein a fissure, four and one-half feet wide, containing quartz, with galena, gray copper, and some brittle silver, assaying 490 ounces silver per ton; developed by three drifts from twenty-five to eighty-three feet in length and a twenty-five-foot shaft.

**Pan Handle Group.**—Amos Kindt and J. P. Flynn, both Ashcroft, and David F. Scull, Jr., Philadelphia, Penn., owners; group comprises the Pan Handle, Center, Bismarck, Mountain Quail, Traveler, Eagle, Creedmoor, Kansas, Water-fall, New Discovery, and Tanawanda lodes, 1500x300 feet each; situated on Slate Mountain, Columbia district, two and one-half miles from Ashcroft; located in 1880 and 1882, and in process of patent; veins all fissures, from two to six feet in width, pay streaks from six to eighteen inches, containing galena, copper, and iron, assaying from 50 to 300 ounces silver per ton, in a quartz gangue; developed by six shafts from ten to fifty feet in depth and ten tunnels from twenty to seventy-five feet in length.



**Panther Group.**—John B. Brooks and George Bethune, both Ashcroft, and Louis Weinel, Hannibal, Mo., owners; group comprises the Panther, Robin Hood, and Eureka No. 2 lodes, 1500x300 feet each; situated on Slate Mountain, Columbia district, six and one-half miles from Ashcroft; located in 1881; veins all fissures, from one to three and one-half feet in width, pay streaks from eight to twenty inches, containing galena, assaying forty per cent lead and forty ounces silver per ton, in a quartz gangue; developed by two shafts eleven and twenty feet in depth and one twenty-one-foot incline.

**Paradox Group.**—Peter Lonergan and J. P. Flynn, both Ashcroft, and J. D. McCarthy, Leadville, owners; group comprises the Paradox, Eureka, Teresa, and Lynn lodes, 1500x300 feet each; situated in Castle Gulch, Columbia district, five miles south-west of Ashcroft; located in June, 1880; veins all fissures, about three feet wide, pays streaks from eight to eighteen inches, containing galena, assaying thirty per cent lead and 150 ounces silver per ton; developed by 150 feet of tunnels and drifts.

**Pearl.**—Group situated on Pearl Mountain, about six miles from Ashcroft; veins all fissures, varying in width, and containing a fair material; developments considerable, and some shipments of high-grade ore made.

**Pecos.**—Julius and F. F. Reiner and Theodore Kraetsch, all Ashcroft, owners; claim 1500x300 feet; situated on the north slope of Pearl Mountain, Columbia district, five miles from Ashcroft; located in 1881; vein a contact, four feet wide, pay streak from seven to fifteen inches, containing quartz, with galena, chlorides, and copper, assaying from eighteen to forty ounces silver per ton; developed by two shafts eighteen and twenty feet in depth.

**Pennsylvania Group.**—Ferdinand Kinkaid, Ashcroft, owner; group comprises the Pennsylvania, Little Chief, Morning Star, Evening Star, Robert E. Lee, and Little Pittsburgh lodes, 1500x300 feet each; situated on Brush Creek, East Columbia district, seven miles from Ashcroft; located in 1882; veins all fissures, from three to fifteen feet in width, containing spar, with galena, assaying 450 ounces silver per ton; developed by six shafts ranging from ten to twenty feet in depth and an incline on the Little Chief vein fifteen feet deep; output forty tons.

**Philadelphia Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; general manager, Samuel Allsop, Jr., Colorado Springs; owns the Quaker, Monument, and Wright lodes, 1500x300 feet each; situated on the west slope of Quaker Mountain, Columbia district; located in 1880; veins all fissures from two to four feet in width, pay streaks from eight to twenty inches, containing galena and gray copper, assaying 120 ounces silver per ton, in a lime-rock gangue; developed by two tunnels ten and sixty feet in length and a twenty-foot shaft, with some other workings.

**Pioneer.**—D. J. and W. L. Hopkins, both Aspen, owners; claim 1500x300 feet; situated on the north-east slope of Aspen Mountain, Roaring Forks district; located in 1879, and in process of patent; vein a fissure ten feet wide, pay streak from ten to twenty-four inches, containing galena in a lime-rock gangue, milling, when sorted, sixty per cent lead and forty ounces silver per ton; developed by a tunnel 220 feet long and two shafts twenty feet deep each; output 250 tons.

**Pride of Aspen.**—J. R. Williams, Peter O'Reiley, and Andrew McFarlane, all Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one-half mile from Aspen; located in 1880; vein a fissure, seven feet wide, pay streak from three to eighteen inches, containing spar and galena, assaying twenty ounces silver per ton; developed by two tunnels twenty-five and fifty feet in length and a twenty-five-foot shaft.

**Pride of the Hills.**—(See Traynor and Pride of the Hills.)

**Prospect Mining Company (The).**—Incorporated under the laws of Kansas in 1880; capital stock $100,000, in 1,000 shares of $10 each, non-assessable; president, D. M. Swan; vice-president, John Crancer; secretary, W. B. Fletcher; treasurer, M. H. Insley—all Leavenworth, Kas.; general manager, J. A. Kinney, Ashcroft; offices Leavenworth and Ashcroft; owns an interest in the Rain-storm Group (see Rain-storm Group), and an interest in the Last Chance and Amazon (see Last Chance and Amazon).

**Quaker.**—(See Philadelphia Mining Company.

**Quaker City Group.**—Wm. McMurchy, L. B. Colburn, and Chas. W. Durand, all Aspen, owners; group comprises the Quaker City, Maud S., St. Julian, Gold Queen, Caledonia, and Keystone lodes, 1500x300 feet each; situated at the head of Sandy's Gulch and on Hayden's Peak, Columbia district, five miles from Ashcroft; located in 1881; veins all fissures, from fourteen to sixty inches wide, containing galena, gray copper, and bromides, assaying from 50 to 150 ounces silver per ton, in a quartz gangue; developed by five shafts from ten to thirty feet in depth and two tunnels 20 and 110 feet in length, with some other workings.

**Rain-storm Group.**—Owned by the Prospect Mining Company, M. S. Thomas, Leavenworth, Kas., and Geo. M. Dunn, Denver; group comprises the Rain-storm, Tibbetts, Castle Queen, Vanderbilt, Jay Gould, and May Queen lodes, 1500x300 feet each; situated on Castle Peak and Elk Mountain, Columbia district, four and one-half miles from Ashcroft; located in 1881-82, and in process of patent; veins all fissures, from three to twenty-seven feet wide, pay streaks from three to thirty-two inches, containing quartz and gray copper, milling, when sorted, from 100 to 250 ounces silver per ton; Rain-storm developed by a tunnel fifty-eight feet long; Tibbetts by a tunnel ninety feet long; Vanderbilt by a tunnel fifty-three feet long, and the others by tunnels and shafts varying in length; daily output six tons.

**Ruby.**—(See Wheeler Consolidation Mining Company.)

**Ruby King Group.**—George Bethune and L. H. Brooks, both Ashcroft, owners; group comprises the Ruby King, Humboldt, Little Jane, Lady Alice, and Ontario lodes, 1500x300 feet each; situated on Teocalli Mountain and in West Brush Gulch, Columbia district, five miles from Ashcroft; located in 1880; veins all fissures from three to six feet wide, pay streaks from six to thirty inches, containing galena, gray copper, and black sulphurets, assaying from 50 to 300 ounces silver per ton, in a quartz gangue; developments—assessment work.

**S. E. Watkins Group.**—J. P. Watkins, C. R. and A. W. Johnson, and B. H. Lumley, all Ashcroft, owners; group comprises the S. E. Watkins, Financial, Montana, Tom Scott, and Lucky Boy lodes, 1500x300 each; situated on West Castle Creek, Columbia district, twelve miles from Ashcroft; located in 1882; veins all fissures from two and one-half to three and one-half feet in width, containing quartz, with galena, gray copper, and some brittle silver, assaying 530 ounces silver per ton; developed by a shaft on each lode from ten to twenty feet in depth.

**Shields.**—(See General Shields.)

**Silver Bell Mining Company (The).**—Incorporated under the laws of Minnesota in 1880; capital stock $200,000, in 20,000 shares of $10 each, non-assessable; office Aspen, Colo.; owns the Silver Bell lode, 1500x300 feet; situated on Silver Bell Hill (Aspen Mountain), Roaring Forks district, one and one-half miles from Aspen; located in 1879; vein a contact, three and one-half feet wide, pay streak from two to twelve inches, composed of spar, carrying galena and native silver, assaying eighty-seven ounces silver per ton; developed by two open cuts twenty feet long each.



**Silver Chief Group.**—Charles W. Durand and others, Aspen, owners; group comprises the Silver Chief, Pride of the West, Helena, Manitou, Ute, Silver Star, Denmark, Colorado Chief, West Castle and Rocky Point lodes, 1500x300 feet each, situated on the east side of West Castle Creek, or Conundrum Gulch, Roaring Forks district, ten miles from Aspen; located in 1881; in process of patent; veins all fissures from two to eight feet in width, pay streaks from six to fifteen inches, containing quartz with galena and gray copper, assaying 200 ounces silver per ton; developed by a tunnel seventy-five feet long and by an open cut fifty-five feet long; output fifty tons.

**Silver Star.**—Wm. H. Lawrence, Milwaukee, Wisconsin, Jesse Sinclair and Tingley S. Wood, both Leadville, and Chas. Green and James Lyons, both Aspen, owners; claim 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, one and one-half miles from Aspen; located in 1880; vein a contact varying in width, pay streak from fifteen to eighteen inches, containing galena and copper, assaying twenty ounces silver per ton, in a lime-rock gangue; developed by a shaft sixty feet deep and a drift from bottom of shaft forty feet long.

**Silver Star.**—H. A. W. Tabor, Denver, Washington Bowman, New York City, and T. W. Durand, C. H. Jacobs, and James McPherson, Aspen, owners; claim 1500x300 feet; situated on the north slope of Aspen Mountain, Roaring Forks district, one mile from Aspen; located in 1880; vein a contact two feet wide, containing spar with galena and chlorides, assaying twenty-five per cent lead and 100 ounces silver per ton; developed by two tunnels forty-five and ninety feet in length and a shaft thirty-five feet deep; output thirty tons.

**Silver Wave and Lake View.**—R. B. McCollim, Chas. Bovart, Edward Nathan, and Frank Plummer, all Ashcroft, owners; claims 1500x300 feet each; situated in Traveler's Gulch, Columbia district, four miles from Ashcroft; vein a fissure six feet wide, containing galena, assaying thirty-five per cent lead and from 60 to 110 ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five and thirty feet in length.

**Sinclair Tunnel.**—A. P. Mackey, J. R. Mason, Henry Weber, and R. R. Teller, Chas. Field, Chas. W. Durand, and Jesse Sinclair, all Aspen, owners; site 3000x6 feet; situated in Ophir Gulch, Roaring Forks district, three miles from Aspen, and located in 1880; on which a tunnel is driven 340 feet long, cutting two contact veins four feet in width, containing galena, assaying thirty per cent lead and ten ounces silver per ton, in a spar gangue; on which two locations, viz., the Mackey and Julia, have been made, and developed, additionally, by two shafts ten and twenty-five feet in depth.

**Smuggler Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Bela M. Hughes, Denver; general manager, C. A. Hallam, Aspen; offices Denver and Aspen; owns the Smuggler lode, 1500x300 feet; situated at Aspen, Roaring Forks district; located in 1879, and patented in 1881; vein probably a fissure thirty feet wide, pay streak from five to thirty-two inches, containing galena in a lime-rock gangue, milling, when sorted, thirty per cent lead and twenty-five ounces silver per ton; developed by a shaft 108 feet deep, three cross-cuts, twenty, thirty, and forty-five feet in

length, a tunnel 100 feet long, and a drift on the vein seventy-five feet long, with some other workings; operated by a twenty-five-horse-power engine, with capacity to produce ten tons per day.

**Spar.**—(See Forsaken Group.)

**Spar.**—A. D. Breed, New York City, owner; claim 1500x300 feet; situated on Spar Mountain, Roaring Forks district, one mile from Aspen; located in 1879, and in process of patent; vein a contact six feet wide, pay streak from twelve to twenty-two inches, containing galena and chlorides in a spar gangue, milling, when sorted, thirty per cent lead and from 25 to 1,000 ounces, and probably averaging 200 ounces, silver per ton; developed by two tunnels 75 and 200 feet in length and a seventy-five-foot incline shaft, with some other workings.

**Spring Ranch.**—J. C. Eames and George Marshall, both Aspen, and S. A. Anderson, Spring Butte, owners; claim 1500x300 feet; situated on Rock Creek, Columbia district, thirty-five miles from Aspen; located in 1882; vein a fissure, varying in width, and containing galena, assaying sixty per cent lead and fifteen ounces silver per ton, in a lime-rock gangue; developed by a tunnel twenty-five feet long.

**St. Elmo Group.**—J. W. Jacque, J. Y. Marshall, W. K. Burchinell, Charles Le Claire, and F. O. Glanson, all Leadville, owners; group comprises seven claims, 1500x300 feet each; situated in Conundrum Gulch, or West Castle Creek, Columbia district; veins all fissures, from four to eight feet in width, containing quartz and galena with some silver glance, milling, when sorted, from 50 to 200 ounces silver per ton; developed by a shaft eighty feet deep and seventy feet of drifting.

**Stockholm Group.**—Consisting of the Silver Boy and several other claims; situated on Silver Mountain, south of Ashcroft; veins all fissures, varying in width, and containing a fair material; developments—over 500 feet of work, 125 feet of which is an incline shaft on the Silver Bell, said to expose a large ore body.

**Tam O'Shanter and Montezuma Group.**—H. A. W. Tabor, W. B. Daniels, W. G. Fisher, and others, all Denver, Joel Smith and Jacob Sanders, both Leadville, owners; Eben Smith, Ashcroft, manager; group comprises the Tam O'Shanter, Montezuma, Borealis, Halcyon, Green Lake, Last Chance, and Ivanhoe lodes, 1500x300 feet each; situated on Slate Mountain, Columbia district, five miles from Ashcroft; located in 1880, and Tam O'Shanter, Borealis, and Halcyon patented in 1881; veins all fissures, from four to six feet in width, pay streaks from eight to thirty-six inches, containing gray copper, lead and copper carbonates, and galena, in a quartz gangue, milling, when sorted, from twenty to sixty per cent lead and from 60 to 140 ounces silver per ton; Tam O'Shanter developed by four tunnels on the vein from 40 to 150 feet in length, with some other workings; Montezuma by a shaft 100 feet deep and a 500-foot tunnel on the vein, with considerable drifts, winzes, stopes, etc., and the others less extensively; improvements—steam machinery, motive power supplied by a thirty-horse-power engine, ore and shaft houses, etc.

**Titan and J. M. Wilson.**—L. J. Worthington and J. Porter, both Plattsburg, Mo., J. Brennand, A. P. Mackey, and J. F. Mason, all Aspen, owners; claims 1500x300 feet each; situated on West Castle Creek, or Conundrum Gulch, Roaring Forks district, ten miles from Aspen; located in 1881; vein a fissure, four feet wide, containing quartz, with galena, gray copper, and some silver glance and silver bromides, assaying 130 ounces silver per ton; developed by a shaft fifty feet deep and a tunnel twenty feet long.



**Traynor and Pride of the Hills.**—John McGeean, John Canning, James Farley, J. W. Deane, and others, Aspen, owners; claims 1500x300 feet each; situated on the east slope of Aspen Mountain, Roaring Forks district, one-half mile from Aspen; located in 1880; veins both contacts, from six to twenty feet wide, pay streaks from four to twenty-two inches, containing galena in a spar gangue, milling, when sorted, sixty per cent lead and thirty ounces silver per ton; developed by two tunnels 30 and 200 feet in length, a thirty-foot open cut, and a drift 120 feet long; output 100 tons.

**Tucker Group.**—Situated on Slate Mountain, near the Tam O'Shanter property; veins all fissures, from one to six feet wide, pay streaks from four to twenty inches, containing lead and copper carbonates and galena in a quartz gangue, assaying fairly, and the property is being steadily developed.

**Turner and Baltic.**—Julius Reiner and Theodore Kraetsch, both Ashcroft, owners; claims 1500x300 feet each; situated on the east slope of Slate Mountain, Columbia district, three miles from Ashcroft; located in 1880; vein a fissure, six feet wide, pay streak from twelve to fourteen inches, containing galena, gray copper, and iron pyrites, assaying from 20 to 300 ounces silver and two-tenths ounce gold per ton; developed by two shafts twenty-five and sixty feet in depth and a drift twenty-two feet long.

**Unexpected Mining Company (The).**—Incorporated under the laws of Colorado, in March, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Hugh Butler; secretary, Frank A. Young—both Denver; treasurer, J. A. Thatcher, Aspen; offices Denver and Aspen; owns the Unexpected lode, 1500x300 feet; situated at the head of Sandy's Gulch, Columbia district, three miles from Ashcroft; located in 1881, and patented in January, 1882; vein a fissure, from eighteen to twenty-four inches wide, containing galena and chlorides in a quartz gangue, milling, when sorted, fifty per cent lead and seventy ounces silver per ton; developed by two shafts twenty-six and thirty feet in depth, and three tunnels, 30, 50, and 190 feet in length; output 200 tons, and daily shipments ten tons.

**Unfortunate.**—M. D. Hannaker and N. J. Steele, both Ashcroft, owners; claim 1500x300 feet; situated in Conundrum Basin, Columbia district, ten miles from Ashcroft; located in 1882; vein a fiesure four feet wide, containing quartz and galena with some silver glance, assaying thirty-four ounces silver per ton; developed by a shaft ten feet deep.

**Unicorn.**—L. W. Worthington and Thomas J. Porter, both Plattsburg, Mo., and T. E. Holland and Benjamin M. Hypes, both St. Louis, owners; claim 1500x300 feet; situated on Slate Mountain, three and one-half miles from Ashcroft, Columbia district; located in 1880; vein a fissure six feet wide, pay streak from six to thirty inches, containing galena and black sulphurets, assaying ninety ounces silver per ton, in a quartz gangue; developed by a shaft eighteen feet deep and a tunnel forty-eight feet long,

**Velayjo Group.**—R. C. Wilson, M. Gavitt, and Harry Medoris, all Aspen, owners; group comprises the Velayjo and Aspen Queen, 1500x300 feet each, and Delta lode, 435x300 feet; situated on the north slope of Aspen Mountain, Roaring Forks district, three-fourths mile from Aspen; located in 1879 and 1881; veins all fissures, from two to six feet wide, containing spar and galena, assaying from forty to sixty ounces silver per ton; developed by four shafts from thirty-four to sixty-seven feet in depth and two tunnels thirty and fifty-six feet in length.

**Vermont Group.**—Jason E. Freeman and R. H. Williams, both Aspen, owners; group comprises the Vermont and Bangor, 1500x300 feet

each, and Bobtail lode, 1200x300 feet; situated in Conundrum Gulch, Columbia district, eleven miles from Aspen; located in 1881; veins probably fissures, from one to four feet wide, pay streaks from four to eighteen inches, containing galena and gray copper, assaying three-tenths ounce gold and fifteen ounces silver per ton, in a quartz gangue; developed by three tunnels thirty feet long each.

**Watkins Group.**—(See S. E. Watkins Group.)

**Wheeler Consolidation Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president and manager, F. W. Owers, Buena Vista; owns the Ruby lode, 1500x300 feet; situated on Aspen Mountain, Roaring Forks district, three-fourths mile from Aspen; located in 1879; vein a contact four feet wide, containing spar with galena and chlorides, assaying 100 ounces silver per ton; developed by two tunnels on the vein thirty and forty feet in length.

**Wichita Group.**—Robert McCallum and Henry Bush, both Ashcroft, owners; group comprises the Wichita, Pittsburgh, Lime, and Grayback lodes, 1500x 300 feet each; situated on Slate Mountain, near Tam O'Shanter Group, Columbia district, four miles from Ashcroft; located in 1880; veins all fissures, from three to twelve feet wide, pay streaks from six to twenty inches, containing galena, assaying fifty per cent lead and from 40 to 200 ounces silver per ton; developed by two shafts twenty and thirty-nine feet in depth and three tunnels, 20, 25, and 285 feet in length.

**Wilkes Barre Group.**—L. W. Worthington and John O'Connors, both Ashcroft, owners; group comprises the Wilkes Barre, Minnie, and Little Tom lodes, 1500x300 feet each; situated at the head of Traveler's Gulch, Columbia district, four miles from Ashcroft; located in 1882; vein a fissure, three feet wide, pay streak eighteen inches, containing gray copper and chlorides, assaying 500 ounces silver per ton, in a quartz gangue; developed by a shaft thirty feet deep and a tunnel on the vein twenty feet long.

**Yellow Boy Group.**—B. L. Soule, J. P. Flynn, and John A. Thompson, all Ashcroft, F. A. Tappan, Leadville, and G. E. Davison, Maryland, owners; group comprises the Yellow Boy, Inez, Lilliputian, and Bon-ton, 1500x300 feet each, and the North Star and Byron, fractional claims; situated on Slate Mountain, adjoining the Tam O'Shanter mine, Columbia district, three and one-half miles from Ashcroft; located in 1880, and in process of patent; veins all fissures, from two to six feet in width, pay streaks from four to forty-four inches, containing galena, lead and copper carbonates, chlorides, sulphurets, and gray copper, assaying thirty per cent lead and 150 ounces silver per ton, in a quartz gangue; developed by four tunnels from 55 to 100 feet in length, with some other workings.

# Pueblo County.

**Eyler Smelter.**—(In course of erection); situated at Pueblo; containing complete and improved machinery for the treatment of ores, with the necessary motive power.

**Pueblo Smelting and Refining Company (The).**—Vice-president and general manager, A. W. Geist; office Pueblo; owns a smelting-works; situated on the Denver & Rio Grande Railroad, one mile from Pueblo; containing improved machinery for the treatment of ores, with ample motive power; production for 1882 $3,279,405 in bullion.

# Routt County.

This County was created in 1877 by a division of Grand, and occupies the north-western corner of the State, adjoining the Territories of Wyoming and Utah, being bounded on the east by Grand and on the south by Garfield and Eagle Counties. It has an estimated population of 600, with Hayden as the county seat, and covers an area of 5,300 square miles, the greater portion of which is devoted to agriculture and stock-raising, the pursuit of mining being confined to a small territory in the vicinity of Hahn's Peak, where several placers have been washed for a number of years past, most of the work being conducted by two companies, the International and the Hahn's Peak Mining Company. There is no positive data showing the actual yields, but the fact of the ground having been worked regularly is evidence that the results have been satisfactory. A few veins containing argentiferous lead and copper ores have been found in different quarters, but not developed, by reason of the distance from the market, and more or less lode mining has been done without material returns. Some surprising discoveries are reported to have recently been made in the mountains about Steamboat Springs, but no reliable data have been received in relation to the quality or quantity.

The settlement of this region has been retarded by the hostility of the Ute Indians. It was their favorite hunting ground, and they did for years jealously and successfully guard it against the encroachments of the white race. Now, however, that the savages have been removed, it is believed that the better portions of the County will be occupied by farmers, stock-growers, and miners, and that the very small addition which it has made to the production of the precious metals will be materially increased.

# Rio Grande County.

This County is situated on the western side of the San Luis Park, and is bounded on the north by Saguache, on the east by Costilla and Conejos, on the south by Conejos, and on the west by Hinsdale County. It has an estimated population of 2,000, with Del Norte as the county seat, and covers an area of 1,332 square miles, the resources of which are about evenly divided between agriculture, stock-raising, and mining.

The mineral-bearing section is confined to a small portion of the County, there being only one district—the Summit—occupying the south-western corner, from twenty-five to thirty miles from Del Norte. Attention was first attracted to this locality in the autumn of 1873, when some discoveries were made, but progress was slow until 1881, during which year deposits of extraordinary richness were found. Its geology is both intricate and interesting. Touching this question Prof. J. Alden Smith says: "To define it in detail, so that one unfamiliar with the phenomenal features exposed in the course of under-ground exploitation would be able to comprehend it fully without illustrative drawings, would be very difficult. It is sufficient to state that the entire formation in which the mines are found is eruptive, the gangue of the ores wholly altered eruptive rock, not varying materially in composition from the inclosing country, though in physical appearance its characteristics are so distinctive as to render the precious metal-zones easily traceable, and the contents of the ore gold in the meltallic state, with mere traces of silver, yielding readily a large per cent of its value to the ordinary stamping-mills." The lodes are large, the ores extremely rich, and the cost of treatment insignificant, when compared with the expense incident to most of the other gold-bearing belts, thereby making the profits large. The results achieved in the past two years are surprising, and give assurances that Summit will shortly become one of the greatest mineral sections in the State.

In 1881 its output was $280,000, in 1882 $310,000, giving the County a third rank as a gold-producer, and in 1883 it will probably take the second place. It is well supplied with mills, having nine altogether, with 155 stamps, generally of the most improved construction.

Summitville, situated in a small park at the head of Wrightman's fork of Alamosa Creek, and at an altitude of 11,300 feet, is the only town in the district. It is connected with Del Norte by wagon road and telephone.

**Aztec.**—Owned by Schiffer Bros., Del Norte; claim 300x1500 feet; situated on the east slope of South Mountain, adjoining and contiguous to the Golconda Mining Company's property, one and one-half miles from Summitville, Summit district; vein has defined walls and an average width of fourteen feet, containing gold in the metallic state, with traces of silver, in an altered eruptive gangue-matter, the so-called pay streak varying in width from three to fifteen inches, portions of which yield, by the ordinary stamp-mill process, from $250 to $750 per ton; developments—one tunnel 250 feet long and one shaft 145 feet deep, with considerable stoping and some drifts, showing large ore-reserves.



**Aztec Mill.**—Owned by Schiffer Bros., Del Norte; situated on South Mountain, near the Aztec mine; containing five Stamps, with the necessary motive power.

**Columbia Gold Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, L. W. Webb, Pueblo; vice-president, August W. Newell; secretary and treasurer, Fred. H. Newell; superintendent, S. J. Berlin—all Summitville; offices Bradford and Summitville; owns two claims, viz.: the Columbia and Frise, 1500x300 feet each; situated on the north slope of South Mountain, Summit district, near Summitville; located in 1864; veins probably fissures, varying in width from five to ten feet, containing gold in the metallic state, with traces of silver, in an altered eruptive gangue, milling, by the ordinary stamp process, when sorted, $30 per ton; developed by a tunnel 150 feet long and a fifty-five-foot shaft, with some other workings; and the Big Nugget placer, twenty acres, situated at Summitville; developments consisting of some surface-work.

**Contention.**—Owned by J. A. Jackson, Del Norte; claim 850x120 feet; situated on the north slope of South Mountain, Summit district, one-half mile from Summitville; located in 1882; vein probably a fissure, twelve feet wide, containing gold in the metallic state in an altered eruptive gangue, assaying from $10 to $50 per ton; developed by one twelve-foot shaft.

**Del Norte.**—(See Little Annie Gold Mining Company.)

**Empire Group.**—John R. Burroughs, Del Norte, owner; group embraces the Empire and Dillworth, 1500x300 feet each, Tunnel No. 2, 3000x6 feet, and a placer, fifteen acres, adjoining the tunnel site; situated on South Mountain, Summit district, thirty miles from Del Norte; located in 1876, 1878, and 1880, and patented; vein probably a fissure, varying in width from five to fifteen feet, pay streak from twelve to fifteen inches, containing metallic gold, with traces of silver, in altered eruptive gangue, milling, when sorted, by the ordinary stamp process, from $50 to $125 per ton; developed by a tunnel 195 feet long, with some other workings.

**Golconda Mining Company (The).**—Incorporated under the laws of Colorado; president, Thos. M. Bowen; vice-president, O. Goodrich; secretary and treasurer, Chas. A. Braslow; manager, B. F. Barclay—all Del Norte; owns the Golconda Tunnel site, 3000x6, feet, and four claims, 300x1500 feet each, viz.: Len, Game-cock, Mick, and Boss; all patented, except the first, and lying contiguous to each other, crossing the tunnel site and nearly parallel; situated on the east slope of South Mountain, about one and one-half miles from Summitville, Summit district; the developments consisting of two cross-cut tunnels, both on the tunnel site, and known as the Golconda and No. 2, 467 and 400 feet long, the latter 325 feet above the former, and showing veins, probably fissures varying in width from two to twenty feet, containing gold in the metallic state, with traces of silver, in a altered eruptive gangue, some portions of the mineral zone being very rich and others lean, milling, when sorted, by the ordinary stamping process, from $25 to $150 per ton, and the different lodes varying widely both in quality and size, but all possessing characteristics similar to those of the San Juan Consolidated Gold Mining Company's and the Odin Mining Company's properties; improvements—a stamp-mill, equipped with twenty Stamps, motive power supplied by a thirty-horse-power engine, and connected with mine by an automatic gravitation tram-way without any cable.

**Goldsmith Maid.**—(See Southern Colorado and N. M. P. & M. Co.)

**Iowa and Colorado Consolidated Mining Company (The).**—Incorporated under the laws of Iowa; capital stock $20,000,000, in 2,000,000 shares of $10 each, non-assessable; president, John H. Gear; vice-president, B. S. Farris; secretary, John Gibson; treasurer, Geo. Millard; superintendent, S. B. Schronty; offices Glenwood, Ia., and Summitville; owns the Golden Vault and others, claims 1500x300 feet each, and ten placer claims; situated on and at South Mountain, Summit district, near Summitville; veins probably fissures, varying in width from two to eight feet, and containing metallic gold, with traces of silver, in an altered eruptive gangue, milling, when sorted, by the ordinary stamp process, from $10 to $1,000 per ton; developed by about 2,000 feet of tunnels and shafts, considerable winzes, stopes, etc.; the Golden Vault vein being cut by a tunnel 700 feet long, which passes through another vein of good ore; improvements—steam machinery, motive power supplied by a thirty-horse-power engine, ore-houses, etc., and wire tram-way of the Halliday patent, connecting the mine with the Company's mill (built by Frasers & Chalmers, Chicago), and situated at Summitville; building 90x72 feet, containing forty Stamps, Blake Crusher, and complete machinery for grinding and amalgamating; motive power supplied by two engines, forty-horse power each; capacity from 80 to 100 tons per day (twenty-four hours).

**Little Annie Gold Mining Company (The).**—Incorporated under the laws of New York; capital stock $5,000,000, in 50,000 shares of $100 each, non-assessable; president, Johnston Livingston; secretary, L. W. Winchester—both New York City; superintendent, S. J. Berlin, Summitville; offices 65 Broadway, New York, and Summitville; owns the Little Annie, 1500x300 feet; situated on the north slope of South Mountain, Summiville, Summit district; located in September, 1873; and patented; vein probably a fissure, varying in width from one to four feet, and containing metallic gold in an altered eruptive gangue, with some oxidized iron, milling, when sorted, by the ordinary stamp process, from $25 to $50 per ton; developments—tunnels, shafts and levels aggregating 1,500 feet, with considerable winzes and stopes; improvements—steam machinery, ore-houses, shaft-houses, etc., and a gravitation and automatic wire tram-way 1,500 feet long, connecting the mine with the mill; the Del Norte, adjoining the Little Ida, and the Golden Queen, 1500x300 feet each; situated on the north slope or South Mountain, at Summitville; located in 1873; veins probably fissures, in the Del Norte somewhat wide than on the Little Annie, and in the Golden Queen from five to thirty feet, containing metallic gold in an altered eruptive gangue, milling, when sorted, by the ordinary stamp process, $40 per ton; developed through the Little Annie workings; and several other claims adjoining these.

And owns a stamp-mill (built by Fraser & Chalmers); situated at Summitville; building 120x60 feet, containing forty Stamps and other machinery; motive power supplied by a sixty-horse-power engine, with ample boilers.

**Little Ida.**—(See San Juan Consolidated Gold Mining Company.)

**Major.**—E. T. Elliott, J. Ellison, both Del Norte, E. R. Campbell, H. C. Chapin, J. B. Bissell, and others, Leadville, owners; claim 1500x50 feet; situated on South Mountain, Summit district, at Summitville; located in 1872; vein probably a fissure, from five to fifty feet wide, containing metallic gold in analtered eruptive gangue, milling, when sorted, by the ordinary stamp process, from $30 to $60 per ton; developed by a tunnel 375 feet long, with some other workings; output $25,000.

**Missionary.**—Situated at the base of South Mountain, at Summitville, Summit district; vein probably a fissure, containing an ore and gangue similar



to the other properties in this locality, only that it is somewhat refractory, and requires a preparatory roasting before it can be milled; developments considerable.

**Odin Mining Company (The).**—Incorporated under the laws of Colorado; president, Thomas M. Bowen; vice-president, O. Goodrich; secretary and treasurer, Chas. A. Braslow; manager, P. F. Barclay, all Del Norte; owns the Odin and Oding, two claims, 300x1500 feet each; situated on the north slope of South Mountain, contiguous to the San Juan Consolidated Gold Mining Company's property, a few hundred yards from Summitville, Summit district; located in 1874; the developments consisting of three cross-cut tunnels, 670, 162, and 30 feet long, respectively, the first, however, being the same as one of those on the Little Ida (see San Juan Consolidated Gold Mining Company), all cutting the lode at depths corresponding with their lengths, showing a vein varying in width from forty to fifty feet, containing a free-milling gold ore, with traces of silver, in an altered eruptive gangue, yielding a large percentage of its value to the stamp-mill; improvements consist of a mill, motive power supplied by a thirty-horse-power engine, and containing twenty Stamps, with equipments about the same as the San Juan Consolidated Gold Mining Company's mill, the tram-way of the latter being used to transport the ore from the mines, and also four bins with a capacity of six week's supply.

**Prospect Mountain Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Henry Room; secretary, D. P. Carr; office Del Norte; owns the following claims: Eureka, Last Dime, Silver Chief, Bonanza, Bonanza Chief, Keystone, Pittsburgh, and Home-stake, 1500x300 feet each; situated in the Summit district, near Summitville; veins probably fissures, varying in width, and containing metallic gold, with some silver, in an altered eruptive gangue, assaying from $5 to $30 in gold and from 10 to 175 ounces silver per ton; developed by a shaft on each claim from ten to thirty feet in depth and a tunnel designed to develop the entire property, now fifty feet long.

**San Juan Consolidated Gold Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Thomas M. Bowen; vice-president, O. Goodrich; secretary and treasurer, Chas. A. Braslow; manager, P. F. Barclay—all Del Norte; office Del Norte; owns the Little Ida and Highland Queen, two claims, 300x1500 and 300x1350 feet, respectively, lying parallel and overlapping each other a little; situated on the north slope of South Mountain, a few hundred yards from the town of Summitville; and 160 acres of placer ground, on which Summitville is situated, Summit district; located in August, 1874, and all patented; veins probably fissures, the gangue of the lodes altered eruptive rock, not differing greatly in composition from the enclosing country; and the lode on the Little Ida varying in width from eight to sixteen feet, and containing a free-milling gold ore, with mere traces of silver, yielding a large percentage of its value to the ordinary stamp-mill, some of which is very rich, yielding from $1,000 to $2,000 per ton, the mineral zone milling, when sorted, from $25 to $150 per ton, and the ore body differing widely in quality at different parts of the vein; developments—two cross-cut tunnels aggregating 1,500 feet, three levels aggregating about 625 feet, and 200 feet of shafting, with considerable stoping and some drifts, out of which workings has been taken probably $400,000; improvements—ore-house, blacksmith-shop, etc., and a gravitation wire tram-way, with heavy iron T rails, three-fourths-inch wire cables, and four cars of five tons capacity each, connecting the ore-house at the mine with the Company's mill, containing thirty Stamps, with amalgamating-plates of superior soft copper electro-plated with California silver, and four Bertola pans for grinding blanket-tailings and cleaning them

out, motive power supplied by a sixty-horse-power engine and ample boiler, in connection with which is an assay-laboratory, bullion, retorting, and smelting furnaces, and block house enclosing a bullion-safe and dormitory for the accommodation of the guard; and in the Highland Queen the lode varies in width, and containing an ore body similar in general characteristics to that of the Little Ida; the developments consisting of tunnels, drifts, and shafts.

**Southern Colorado and New Mexico Prospecting and Mining Company (The).**—Incorporated under the laws of Colorado; superintendent, J. J. Jones, Summitville, Colo.; office Summitville; owns one claim, viz., the Goldsmith Maid, 1500x300 feet; situated in the Summit district, at Summitville; vein probably a fissure, varying in width, and containing metallic gold, with some silver, in an altered eruptive gangue, yielding fairly; developed by eighty feet of tunnels and two thirty-foot open cuts; and the Ætna placer, 160 acres; situated at Summitville, and developed by 100 feet of drifting.

**Stars and Stripes.**—J. H. Jackson, Thomas M. Bowen, Philip Egan, and Richard Knowlton, all Del Norte, owners; claim 1500x300 feet; situated in Summit district, near Summitville; located in 1881; vein probably a fissure, from ten to twelve feet wide, containing metallic gold in an altered eruptive gangue, assaying from $25 to $50 per ton; developed by two shafts thirty-three and forty-two feet in depth and a thirty-foot tunnel.

**Summit.**—Owned by R. F. Adams, Del Norte, Jno. J. Crooke, Lake City, and Lewis Crooke, New York City; claim 1500x300 feet; situated on the north-east slope of South Mountain, at Summitville; vein probably a fissure, varying in width, containing metallic gold, with traces of silver, in an altered eruptive gangue, milling, when sorted, by the ordinary stamp process, from $20 to $100 per ton; developments and improvements considerable; in connection with which is a stamp-mill, situated at Summitville; motive power supplied by steam and water; capacity twenty tons per day (twenty-four hours).

# Saguache County.

This County was organized in 1867, and is bounded on the north by Gunnison, Chaffee, and Fremont, on the east by Fremont, Custer, and Huerfano, from which it is separated by the Sangre de Christo Range, on the south by Costilla and Rio Grande, and on the west by Hinsdale and Gunnison Counties, the Continental Divide crossing its north-western quarter. It has an estimated population of 6,500, with Saguache (county seat), Bonanza, Villa Grove, Sedgwick, Exchequer, and others (mining centers) as the principal towns, and covers an area of 3,312 square miles, by far the greater portion of which is devoted to agriculture and stock-raising; the mining districts being situated on the two mentioned mountain ranges.

The principal mines of Saguache County are in the Kerber Creek district, occupying the northern portion of the County, on the east slope of the Continental Divide. In them the veins are of somewhat more than the ordinary width, and the ores generally argentiferous and of a medium grade, the copper contents varying from a trace to ten per cent, the lead from a trace to fifty-five, and the silver from fifty to seventy-five ounces per ton. The shipments thus far made have yielded, in copper, lead, and silver, probably an average of $70 per ton, the ores, however, requiring to be reduced by smelting, as most of them have lead and copper in combination with the precious metals. In the Crestone district little more than assessment work on a few of the mines has been accomplished, in the Sangre de Christo section, further south on the same slope, much more has been done, and some bullion produced, and in the other localities the properties are in the various stages of early development.

The metalliferous zone about Bonanza appears to be well filled with mineral resources, and it will soon become a large producer. All that is needed is the advantages of home markets and railway communication; and it is not improbable that the road will be extended from Villa Grove during the present year.

**Ajax.**—Ernest Miller, Frank Kneemyer, and A. G. Bales, all Bonanza, owners; claim 1500x300 feet; situated on Manitou Hill, near the Antero, Kerber Creek district; located in 1882; vein a contact five feet wide, pay streak from five to thirty inches, containing galena and gray copper, assaying fifty per cent lead, and seven per cent copper, and from $10 to $20 in gold per ton; developed by a shaft seventy-five feet deep.

**Alamosa.**—Owner —— Giles; claim 1500x300 feet; situated in the Cottonwood Creek district, forty miles from Villa Grove; located in 1879; vein a fissure five feet wide, containing gold quartz (free-milling), yielding, when sorted, from $60 to $150 per ton; developed by a shaft ninety feet deep.

**Albert.**—J. J. Dofflmyre and George S. Russell, both Bonanza, owners; claim 1500x300 feet; situated on Capidora Hill, Kerber Creek district, two miles from Bonanza; located in 1881; vein a contact from two to four feet wide, containing gray copper and sulphurets, assaying an average of $119 per ton, in a quartz gangue; developed by a shaft 126 feet deep and a forty-one-foot tunnel.

**Almaden.**—Otto Mears, T. Gotthelf, L. Mayer, R. A. Vosburg, and others, Saguache, owners; claim 1500x300 feet; situated in Ford Creek district, six miles from Bonanza; located in 1880; vein a contact five feet wide, pay streak eighteen inches, containing antimonial silver in a quartz gangue; developed by a shaft 106 feet deep.

**Almeda and Big Horn.**—Baker Bros., Saguache, owners; claims 1500x300 feet each; situated on Jones Mountain, Ford Creek district, five miles from Bonanza; located in 1880; vein a contact from two to ten feet wide, pay streak from four to ten inches, containing antimonial silver, assaying from 40 to 250 ounces silver per ton, in a quartz gangue; developed by two shafts forty and sixty feet in depth.

**Andrews Group.**—J. Andrews, D. Williamson, and F. M. Parish, all Bonanza, owners; group comprises six claims, 1500x300 feet; situated on Round Mountain, Kerber Creek district, five miles from Bonanza; located in 1880; vein a contact five feet wide, containing quartz with galena and gray copper, assaying from twenty-five to seventy-five ounces silver per ton; developed by 122 feet of shafts.

**Antero.**—Frederick Mathyas, J. Lahritter, Wm. Hanegan, and B. Fisher, all Bonanza, Colo., owners; claim 1500x300 feet; situated on Manitou Hill, Kerber Creek district, two and one-half miles from Bonanza; located in 1880, and patented; vein a contact thirty-five feet wide, pay streak twelve inches, containing chlorides and galena in a quartz gangue, milling, when sorted, $60 per ton; developed by three shafts, ten, twenty, and sixty feet in depth; output 100 tons.

**Arkansas.**—J. W. Tinsley and D. E. and N. M. Howard, all Bonanza, owners; claim 1500x300 feet; situated on Exchequer Mountain, one mile north of Bonanza; located in 1880; vein a contact four and one-half feet wide, pay streak fourteen inches, containing quartz impregnated with pyrites, galena, gray copper, and chlorides, milling, when sorted, from 75 to 150 ounces silver per ton; developed by a shaft seventy-five feet deep and an adit 175 feet long, showing large ore-reserves.

**Bay State Mining and Milling Company (The).**—Incorporated under the laws of Colorado, February, 1882; capital stock $1,000,000, in 200,000 shares of $5 each, non-assessable; president, J. A. Soward; vice-president, Jas. B. Frye; secretary, Geo. W. Brainard; treasurer, Wm. Fishback—all Gunnison City; manager, Geo. W. Bittenbender, Telluride; owns five claims, 300x1500 feet each, viz.: Big Elk Horn, Silver Horn, Sarapedon, Invincible, and No. 2; situated on the north-east slope of Big Elk Horn Mountain, one mile east of Del Doritta, McDonough district; located in February, 1882, and in process of patent; vein a fissure twelve feet wide, containing chlorides in a quartz gangue, milling, when sorted, $36 per ton in gold and silver; developed by one shaft 118 feet deep and four open cuts ten feet long each; and owns the Bay State mill site, five acres, adjoining the lode claims.

**Belle of Colorado.**—McDonald & Co., Villa Grove, owners; claim claim 1500x300 feet; situated near Round Mountain, Kerber Creek district, and located in 1881; vein a contact four feet wide, pay streak eighteen inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and forty ounces silver per ton; developed by a shaft 135 feet in depth, with some other workings.



**Belmont.**—L. C. Miller, Sedgwick, owner; claim 1500x300 feet; situated in the Kerber Creek district, two miles south-east of Sedgwick, and located in 1880; vein a fissure four feet wide, pay streak six inches, containing galena with some sulphurets and native copper, assaying $600 per ton, in a quartz gangue; developed by a shaft 125 feet in depth.

**Benjamin Franklin.**—John M. Bechtel, Bonanza, owner; claim 1500x300 feet; situated on the divide between Rawley and Copper Gulches, Kerber Creek district, and located in 1882; vein a contact six feet wide, pay streak eighteen inches, containing galena in a quartz gangue; developed by a shaft forty-five feet deep.

**Bessie D Tunnel.**—(See Townsend Group.)

**Black Diamond Coal Mines.**—Owned by J. D. Baldwin, Bonanza, and W. F. Thomas and W. M. Bustard, both Steubenville, Ohio; claim covers 320 acres; situated six miles east of Bonanza; containing a vein, or stratum, of bituminous coal, twenty-two inches in thickness; developed by a shaft seventy-five feet in depth, with some other workings.

**Blink Bonnie.**—George Mackey and R. McKenzie, both Bonanza, owners; claim 1500x300 feet; situated on Smelter Hill, Kerber Creek district; located in 1882; vein a contact, six feet wide, pay streak from six to twenty-two inches, containing galena and copper, assaying $30 per ton, in a quartz gangue; developed by a shaft sixty feet deep and a twenty-foot level.

**Bonanza.**—Kelly and Jennings, Bonanza, and —— Hambert, Colorado Springs, owners; claim 1500x300 feet; situated on Exchequer Hill, Kerber Creek district, three-fourths mile from Bonanza; located in 1880; vein a contact, six feet wide, pay streak from six to twenty-four inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from $25 to $50 per ton; developed by a shaft ninety feet deep and a level fifty feet long; output 150 tons.

**Boss Mammoth.**—(An extension of the Empress Josephine; see Mammoth.)

**Bremen.**—L. B. Schwanteck and G. H. Adams, both Saguache, owners; claim 1500x300 feet; situated near Hot Springs; located in 1878; vein a contact, three feet wide, pay streak eighteen inches, containing galena and gray copper, assaying eighty ounces silver per ton, in a quartz gangue; developed by an open cut thirty feet long.

**Buckhorn Group.**—Owned by A. W. Burrows, Del Norte; group comprises five claims, 1500x300 feet each; situated on Crystal Mountain, Canero district, seventeen miles from Saguache; located in 1882 and 1883; vein a contact, varying in width, containing large bodies of manganese carrying silver, assaying from $20 to $30 per ton; developed by an open cut and tunnel fifty feet in length.

**Carbonate King.**—Owned by Thomas F. Hickey, Saguache; claim 1500x300 feet; situated in Tracey's Cañon, five miles from Saguache; located in 1881; vein a fissure, four feet wide, pay streak sixteen inches of gold-bearing quartz, milling, when sorted, $35 per ton; developed by a shaft fifty feet deep.

**Centralia and Council Bluffs.**—Charles Wendel and Cavins Bros., both Oriental, owners; claim 1500x300 feet; situated on Mount Albert, Blake district, one mile from Oriental and twenty-five miles from Saguache; located in 1881; vein a contact, four and one-half feet wide, pay streak from six to twenty inches, containing galena and copper, assaying forty per cent lead and from twenty to forty ounces silver per ton; developed by a shaft 100 feet deep, with some other workings.

**Cornucopia and Grant.**—Peter McArdle, J. S. Stansbury, and P. R. Cuddigan & Co., all Bonanza, owners; claim 1500x300 feet; situated on Exchequer Mountain, Kerber Creek district; located in 1881; veins probably fissures, from four to ten feet wide, pay streaks from six to twenty-two inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from $50 to $100 per ton; developed by two shafts forty and sixty feet in depth.

**Cuba.**—A. W. Burrows, Del Norte, Stubbs Bros., Saguache, and George Bros., Bonita, owners; claim 1500x300 feet; situated on Gordon Mountain, Fork Creek district, five miles from Bonanza; located in 1880; vein a contact, ten feet wide, containing galena and iron, assaying fifty ounces silver per ton, in a quartz gangue; developed by a tunnel eighty feet long.

**Curran.**—(See Johnny Curran.)

**Dandy Copper.**—W. R. Norris and T. R. Sherbern, both Villa Grove, owners; claim 1500x300 feet; situated on Crestone Creek, twenty miles east of Saguache; located in 1881; vein a fissure, two and one-half feet wide, pay streak twenty inches, containing gold and copper in a quartz gangue, assaying from $50 to $90 per ton; developed by a tunnel thirty feet in length.

**Dhaunic.**—Ernest Miller and W. L. Cooper, both Bonanza, owners; claim 1500x300 feet; situated on Grouse Hill, Kerber Creek district, three miles from Bonanza; located in 1880; vein a contact, six feet wide, pay streak from six to thirty inches, containing galena and copper, assaying $30 per ton, in a quartz gangue; developed by two shafts thirty and fifty feet in depth.

**Eastern Star.**—Claim 1500x300 feet; situated in the Cottonwood Creek district, forty miles from Villa Grove; vein a fissure, four feet wide, containing free-milling gold quartz, yielding, when sorted, from $20 to $50 per ton; developed by a shaft 100 feet in depth and 100 feet of levels, with some other workings.

**Eastern Star Mill.**—Situated in the Cottonwood Creek district, forty miles from Villa Grove, containing five Stamps and other machinery, with the necessary motive power, and supplied to its full capacity by the Eastern Star mine.

**Elizabeth.**—C. W. Bushnell & Co., Oriental, owners; claim 1500x300 feet; situated on Mount Albert, Blake district; located in 1881; vein a contact from three to four feet wide, pay streak eighteen inches, containing galena, assaying twenty ounces silver and one and three-tenths ounces gold per ton, in a quartz gangue; developed by a level seventy feet long.

**Empress Josephine.**—S. F. Hamp, Geo. Tucker, and G. W. Wood, all Bonanza, owners; claim 1500x300 feet; situated in Copper Gulch, one-fourth of a mile east of Bonanza; located in 1880; vein a contact from one to twelve feet wide, pay streak from three to twenty-four inches, containing iron pyrites, gray copper, galena, sulphurets, and antimonial silver, in a quart



gangue, milling, when sorted, $100 per ton; developed by a shaft 210 feet in depth and three levels aggregating 525 feet, with some other workings; operated by a thirty-five-horse-power engine; output $30,000.

**Enterprise.**—W. B. McKinney, Bonanza, owner; claim 1500x300 feet; situated in Copper Gulch, Kerber Creek district, two and one-half miles from Bonanza; located in 1881; vein a contact, five feet wide, containing galena, assaying fifty ounces silver per ton, in a quartz gangue; developed by a shaft forty-five feet deep.

**Erie.**—(See Superior Group.)

**Eureka.**—T. A. Cook, Bonanza, owner; claim 1500x300 feet; situated in Rawley Gulch, Kerber Creek district, two and one-half miles from Bonanza; located in 1880; vein a contact thirty feet wide, pay streak from ten to thirty-two inches, containing copper and galena, assaying from fifty to seventy ounces silver per ton, in a quartz gangue; developed by a shaft forty feet deep which is intersceted by the Union Tunnel 165 feet in length.

**Evening Star.**—C. C. Critz and F. M. Cameron, both Bonanza, owners; claim 1500x300 feet; situated in Squirrel Gulch, Kerber Creek district, three and one-half miles from Bonanza; located in 1880; vein probably a fissure, from two to eight feet wide, pay streak twelve inches, containing galena, sulphurets, and gray copper, assaying seventy-six ounces silver per ton, in a quartz gangue; developed by a tunnel 100 feet long.

**Evening Star.**—Raddatz Bros., Bonanza, owners; claim 1500x300 feet; situated at the head of Clover Greek, four miles north-east of Bonanza; located in 1881; vein a contact, three feet wide, pay streak fourteen inches, containing gray copper and galena, assaying from $100 to $250 per ton, in a quartz gangue; developed by a tunnel thirty feet long and a shaft thirty feet deep.

**Exchequer Group.**—Rathoon, Stansbury & Ritner, Exchequer, owners; group comprises four claims, 1500x300 each; situated on Exchequer Hill, Kerber Creek district, one mile from Bonanza; located in May, 1880; vein a contact about fifteen feet wide, pay streak from three to thirty-two inches, containing galena and gray copper in a decomposed quartz gangue, milling, when sorted, from $50 to $150 per ton; developed by 200 feet of shafts and an incline 130 feet long, and two other seventy-foot inclines.

**Forest King.**—J. Walker & Co., Sedgwick, owners; claim 1500x300 feet; situated in Tuttle Creek district, five miles south-west of Bonanza; located in 1881; vein probably a fissure, six feet wide, pay streak eighteen inches, containing a free-milling gold ore, assaying $90 per ton; developed by a shaft thirty-five feet in depth.

**Forest Queen.**—P. R. Cuddigan, Thomas Cooper, and John Raymond, all Exchequer, owners; claim 1500x300 feet; situated on Exchequer Hill, Kerber Creek district, one mile from Bonanza; located in 1880; vein a contact, four feet wide, pay streak eighteen inches, containing iron carbonates in a quartz gangue, milling, when sorted, from eighteen to sixty ounces silver per ton; developed by a shaft eighty feet deep and a tunnel fifty feet long.

**Fountain and Fountain Cross.**—E. and W. D. Higginbotham, Charles Goodman, and Brown & Liston, all Bonanza, owners; claim 1500x300 feet each; situated in the Manitou district, seven miles from Bonanza; located in 1881 and 1882; veins both contacts, from six to twelve

inches wide, containing lead carbonates, assaying 110 ounces silver per ton, in a decomposed gangue; developed by three shafts, twenty, twenty-five, and ninety feet in depth.

**Four Per Cent Group.**—M. F. Vance, Bonanza, owner; group comprises the Four Per Cent, Last Discovery, and Ute lodes, 1500x300 feet each; situated on Round Mountain, Kerber Creek district, four miles from Bonanza; patented; veins all contacts, from two to four feet wide, pay streaks from four to eight inches, containing gray copper, sulphurets, and galena, in a quartz gangue, milling, when sorted, from $100 to $150 per ton; developed by 120 feet of shafts and some other workings.

**Furrow.**—J. C. Bell and J. W. Furrow, both Bonanza, owners; claim 1500x300 feet; situated on Mineral Hill, Kerber Creek district, one-half mile from Bonanza; located in 1883; vein a contact four feet wide, pay streak from two to six inches, containing gray copper and sulphurets, assaying from fourteen to sixty ounces silver per ton, in a quartz gangue; developed by a shaft sixty feet deep.

**G. Nellie.**—W. R. Norris, T. A. Pringle, and A. H. Major, all Crestone owners; claim 1500x300 feet; situated on San Isabelle Creek, four miles from Crestone and twenty miles from Saguache; located in 1880; vein a fissure three and one-half feet wide, pay streak from three to twelve inches, containing gold and silver bearing quartz, assaying $50 per ton; developed by a tunnel sixty feet long.

**Genevra.**—McDonald Bros., Villa Grove, owners; claim 1500x300 feet; situated between Alder and Clover Creeks, near Round Mountain, Kerber Creek district, four miles north-east of Bonanza; located in 1881; vein a contact four feet wide, pay streak eighteen inches, containing galena, assaying sixty per cent lead and forty ounces silver per ton; developed by an eighteen-foot shaft.

**Gypsy Queen and Monitor No. 4.**—Wm. Hudson, Geo. Young, Geo. Botts, and W. Duncan, all Bonanza, owners; claims 1500x300 feet each; situated on Round Mountain, Kerber Creek district, four miles from Bonanza; located in 1881; vein a contact, from six to eight feet wide, pay streak twenty-four inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from $100 to $200 per ton; developed by a shaft forty feet deep and a tunnel 200 feet long, with some other workings.

**Gold Medal.**—E. P. and S. W. Smith, Wm. Buckley, and M. M. Kellogg, all Rosita, owners; claim 1500x300 feet; situated on Pale Creek; located in 1882; vein probably a fissure, three feet wide, containing hematite iron, carrying gold in a quartz gangue, milling, when sorted, from $50 to $90 per ton; developed by a shaft twenty feet in depth.

**Gold Prize Mill.**—Leased to the San Luis Gold Mining and Milling Company; situated at Sangre de Christo, containing ten 900-pound Stamps, with the necessary motive power; capacity nine tons per day (twenty-four hours).

**Grand View.**—Albert A. Lampe and W. M. Cato, both Saguache, owners; claim 1500x300 feet; situated on Capitol Hill, Blake district, eight miles from Villa Grove, and located in 1879; vein probably a fissure, ten feet wide, containing gold and silver bearing quartz, assaying eighteen ounces silver and a trace in gold per ton; developed by a tunnel twenty-seven feet long.



**Henrietta and Peerless.**—J. B. Reed and J. Blurton, both Villa Grove, owners; claims cover 3000x150 feet; situated on the Steele's Gulch slope of Mt. Shilling, Blake district, seven miles from Villa Grove, and located in 1882; vein a fissure, varying in width, pay streak ten inches, containing gold-bearing quartz and silver chlorides, assaying from $100 to $300 per ton; developed by an adit 130 feet long.

**Home-stake.**—J. R. Ritchie, Wm. Whittington, and W. S. Omertz all Villa Grove, owners; claim 1500x300 feet; situated on Little Kerber Creek, twelve miles from Saguache, and located in 1881; vein a fissure four feet wide, pay streak fifteen inches, containing gold-bearing quartz, milling, when sorted, $87 per ton; developed by a shaft sixty-five feet deep and an adit 144 feet long; output twenty-five tons.

**Hortense.**—E. E. Chipmann & Co., Bonanza, owners; claim 1500x300 feet; situated in Copper Gulch, Kerber Creek district, one-fourth mile from Bonanza, and located in 1881; vein a contact from six to thirty-two inches wide, pay streak six inches, containing tellurium and gray copper in a quartz gangue, milling, when sorted, from $15 to $100 per ton, although a 200-pound shipment yielded $40,000 per ton; developed by a shaft 101 feet deep and a sixty-six-foot level.

**John Roberts.**—John M. Roberts & Co., Bonanza, owners; claim 1500x300 feet; situated on Round Mountain, Kerber Creek district, four miles from Bonanza, and located in 1882; vein a contact three feet wide, pay streak twelve inches, containing galena and sulphurets, assaying from 75 to 100 ounces silver per ton, in a quartz gangue; developed by a tunnel 100 feet long, with some other workings.

**John the Baptist Group.**—John E. South, Del Norte, John B. Moore, Denver, and L. F. Sheldon, Sedalia, Mo., owners; group comprises the John the Baptist, Anna R., and Lady Doran lodes, 1500x300 feet each; situated on Edith and Gordon Mountains, Ford Creek district, five miles from Bonanza, and located in 1879 and 1880; veins all contacts from three to five feet wide, pay streaks averaging fifteen inches, containing antimonial silver and iron, assaying from 20 to 160 ounces silver and from one-half to two and one-half ounces gold per ton, in a quartz gangue; developed by two shafts eighteen and forty-five feet in depth and a tunnel 150 feet long.

**Johnny Curran.**—T. J. Kelly, C. B. Suydam, Charles Grimm, and John Curran, all Sedgwick, owners; claim 1500x300 feet; situated in the Kerber Creek district, two and one-half miles from Bonanza, and located in 1880; vein a fissure three feet wide, pay streak one and one-half feet, containing iron and zinc blende, assaying twenty ounces silver per ton, in a quartz gangue; developed by a shaft sixty feet deep.

**Jone.**—C. R. Stephenson, John South, and Sheldon & Moore, all Bonita owners; claim 1500x300 feet; situated on Jone Mountain, Ford Creek district five miles from Bonanza, and located in 1880; vein a contact eight feet wide pay streak from six to twenty-two inches, containing antimonial silver and iron, assaying from 20 to 180 ounces silver per ton, in a quartz gangue; developed by a shaft thirty-five feet deep.

**Juliette.**—J. B. Constantine and L. George, both Bonanza, owners; claim 1500x300 feet; situated on Gordon Mountain, Ford Creek district, six miles from Bonanza, and located in 1880; vein a contact four feet wide, pay streak from six to thirty inches, containing galena, with some brittle silver, assaying 130 ounces silver per ton, in a quartz gangue; developed by a shaft thirty-five feet deep.

**June.**—Rathoon & Swope, Exchequer, owners; claim 1500x300 feet; situated on Rawley Mountain, three miles from Bonanza, and located in 1880; vein a contact twelve feet wide, pay streak from six to twenty-two inches, containing quartz and gray copper, assaying $35 per ton; developed by a tunnel eighty feet long and a shaft thirty feet deep.

**Kelly & Co.'s Smelter.**—O. W. Kelly & Co., Bonanza, owners; works situated on Kerber Creek, at Bonanza; building 80x40 feet, containing blast-furnace, concentrator, and other machinery, with the necessary motive power; capacity twenty tons per day (twenty-four hours); production in 1882 100 tons of bullion.

**Kessler and Sweet-By-e-and-Bye.**—Geo. B. and W. H. Kessler, Jefferson Hollinger, and J. Irwin Howard, all Del Norte, owners; claims cover 3000x300 feet; situated near Crystal Hill, New Canero district, twenty-one miles from Del Norte, and located in 1882; veins probably fissures, from three to five feet wide, containing gold-bearing quartz, milling, when sorted, from $100 to $1,000 per ton; developed by two shafts sixteen and fifty feet in depth.

**Keystone.**—Rathoon & Co., Exchequer, owners; claim 1500x300 feet; situated in Rawley Gulch, one and one-half miles north-east of Bonanza, and located in 1881; vein a contact five feet wide, pay streak from ten to twenty-two inches, containing galena, assaying $40 per ton, in a quartz gangue; developed by a shaft 100 feet deep and some other workings.

**Lady Gay.**—J. B. Constantine, Bonita, owner; claim 1500x300 feet; situated on Gordon Mountain, Ford Creek district, six miles from Bonanza, and located in 1881; vein a contact six feet wide, pay streak from six to thirty inches, containing galena and brittle silver, assaying 120 ounces silver per ton, in a quartz gangue; developed by a shaft thirty-two feet deep.

**Leadville Group.**—Owned by T. J. Kelly, C. B. Suydam, Charles Grimm, and Edward English, all Sedgwick; group comprises the Leadville Casket, Little Nellie, Little Joe, and Old Kentuck, 1500x300 feet each; situated on Iron Ridge, Kerber Creek district, two and one-half miles from Bonanza, and located in 1881; veins all fissures from one and one-half to twelve feet wide, containing gold-bearing quartz and galena, assaying from $50 to $100 per ton; developed by five shafts from ten to sixty feet in depth.

**Little Bee.**—W. B. McKinney, P. M. O'Hara, George Morris, and Henry Nugent, all Bonanza, owners; claim 1500x300 feet; situated at the head of Copper Gulch, Kerber Creek district, two and one-half miles from Bonanza; located in 1881; vein a contact, four feet wide, containing galena, assaying thirty ounces silver per ton, in a quartz gangue; developed by a shaft fifty-five feet deep.

**Little Jennie Mining Company.**—(Unincorporated); composed of Hon. Charles Foster, and others, Columbus, Ohio; superintendent, James Deny, Bonanza, Colo.; owns the Little Jennie, 1500x300 feet, and the Radcliffe, and Mt. Joy groups, comprising eleven claims, 1500x300 feet each (two patented); situated on Round Mountain, Kerber Creek district, four miles from Bonanza; located in 1880; veins all contacts, from four to ten feet wide, pay streaks from six to thirty-two inches, containing galena, zinc blende, and antimonial silver, in a quartz gangue, milling, when sorted, thirty per cent lead and fifteen ounces silver per ton; developed by a 420-foot tunnel, 710 feet of shafts, and 165 feet of drifts, with some other workings, and considerable improvements.



**Little Lily and Fairview.**—Williams Bros., Sedgwick, owners; claims 1500x300 feet each; situated on Iron Mountain, two miles north of Sedgwick, Kerber Creek district; located in 1880; vein a fissure, four feet wide, pay streak eight inches, containing galena and gray copper, assaying $125 per ton, in a quartz gangue; developed by two shafts sixty and eighty feet in depth, respectively.

**Lucky Boy.**—Geo. Loughts, Claytonia, owner; claim 1500x300 feet; situated on the Little Kerber Creek slope of Home-stake Mountain, Ford Creek district, twelve miles from Villa Grove; located in 1881; vein a fissure, three feet wide, pay streak twelve inches, containing galena with some brittle silver, assaying $100 per ton, in a quartz gangue; developed by a shaft fifty feet deep.

**Maggie.**—P. H. and F. P. Burtschy, both Saguache, E. T. Steel and M. L. Rice, both Oriental, owners; claim 1500x300 feet; situated in Hayden Pass, one mile north of Oriental and twenty-five miles from Saguache; located in 1880; vein a fissure, three and one-half feet wide, pay streak fifteen inches, containing gold-bearing quartz, assaying $227 per ton; developed by a shaft sixty feet deep.

**Major Group.**—L. B. Schwanbeck and Wm. Maul, Saguache and Villa Grove, owners; group comprises four claims, 1500x300 feet each; situated on Major Creek, twelve miles from Villa Grove, containing a large deposit of hematite iron, assaying sixty per cent iron; developed by a tunnel forty feet long and three shafts twenty feet deep each.

**Mammoth.**—C. W. Dennison and J. M. Hewes, both Bonanza, owners; claim 1500x300 feet; situated on the south slope of Mineral Hill, one-fourth mile from Bonanza, and located in 1881; vein a contact, from three to seven feet wide, pay streak from three to twenty-two inches, containing iron pyrites, black sulphurets, gray copper, galena, and antimonial silver, in a quartz gangue, milling, when sorted, $80 per ton; developed by a shaft eighty-five feet deep and a level seventy feet long; output fifty tons.

**Mammoth Group.**—C. W. and E. H. Bushnell, J. C. Murray, and O. D. Blanchard, all Oriental, owners; group comprises the Mammoth, Wild Cat, and Hunkidori lodes, 1500x300 feet each; situated on Mt. Albert and on Murray Hill, Blake district, three-fourths of a mile from Oriental, and located in 1882; veins all contacts, from eighteen to thirty inches wide, pay streaks from six to twelve inches, containing galena in a quartz gangue, milling, when sorted, $50 per ton; developed by forty feet of tunnels and 100 feet of shafts.

**Manitou Group.**—H. D. Tourney, C. S. Osborn, E. M. Hardesty, all Bonanza, J. N. Strong, Columbus, Ohio, and Frank M. Barnes, Poncha Springs, owners; group comprises twelve claims, 1500x300 feet each; situated at head of Alden Gulch, Kerber Creek district, three miles from Bonanza, and located in 1880; veins all contacts, from one to three feet in width, pay streaks from three to twelve inches, containing galena and copper, assaying four per cent lead, fifteen per cent copper, and forty ounces silver per ton, in a quartz gangue; developed by 250 feet of shafts and a cross-cut tunnel 596 feet long, with some other workings.

**Mascot and Bohemian.**—Reuben Jeffrey, Reuben Jeffrey, Jr., Charles Newton, and Frank M. Simmons, all Denver, owners; claims 1500x300 feet each; situated at Hayden Pass, Blake district, seven miles from Villa Grove, and located in 1882; veins both fissures, seven feet wide, partially composed of gold-bearing quartz, milling, when sorted, $80 per ton; developed by a shaft 96 feet deep and some other workings.

**Midnight and Elva.**—J. M. Roberts & Co., Bonanza, owners; claims 1500x300 feet each; situated on Round Mountain, Kerber Creek district, four miles from Bonanza, and located in 1881; veins both contacts, two and one-half and five feet in width, respectively, containing quartz with galena and iron pyrites, assaying one-tenth ounce gold and 120 ounces silver per ton; developed by a tunnel 170 feet in length and a shaft from end of tunnel fifty feet deep, with some other workings.

**Mineral King.**—Bean Bros., Cañon City, owners; claim 1500x300 feet; situated on Mt. Albert, Blake district, and located in 1881; vein a contact, four feet wide, containing galena, assaying from $40 to $75 per ton, in a quartz gangue; developed by a shaft forty feet in depth.

**Monitor No. 4.**—(See Gypsy Queen and Monitor No. 4.)

**Mountain Boy.**—M. M. Kellogg and S. C. Kohl, both Rosita, owners; claim 1500x300 feet; situated in Cottonwood Gulch district, forty miles from Villa Grove, and located in 1883; vein probably a fissure, varying in width, pay streak two and one-half feet, containing free-milling gold quartz, yielding from $50 to $100 per ton; developed by a twenty-foot shaft.

**Mountain-lion Group.**—J. A. Bertschy and others, Saguache, owners; group comprises the Mountain-lion, Smuggler, Prospector, and Julia L. lodes 1500x300 feet each; situated at Hayden Pass, and on the Sangre de Christo Range, three miles east of Villa Grove, and located in 1880; vein a contact sixteen inches wide, containing galena in a quartz gangue, milling, when sorted, forty per cent lead, $10 in gold, and twenty-five ounces silver per ton; developed by a shaft 100 feet deep, with some other workings.

**Mount Joy Group.**—(See Little Jennie Mining Company.)

**Nonpareil.**—John and James Robar, Ernest Miller, and George Mackey, all Bonanza, owners; claim 1500x300 feet; situated on Smelter Hill, Keber Creek district, and located in 1881; vein a contact five feet wide, pay streak from six to thirty-two inches, containing galena and copper in a quartz gangue, milling, when sorted, $40 per ton; developed by three shafts, twenty, thirty-two, and fifty feet in depth.

**North Andover.**—C. W. and E. H. Bushnell, J. C. Murray, and O. D. Blanchard, all Oriental, owners; claim 1500x300 feet; situated on Mount Albert, Blake district, three-fourths of a mile from Oriental, and twenty-five miles from Saguache; located in 1881; vein a contact two feet wide, pay streak from ten to twenty-two inches, containing galena and hematite iron in a quartz gangue, milling, when sorted, $50 per ton; developed by one main tunnel 100 feet long and other tunnels aggregating 225 feet; output 200 tons.

**North Pole.**—J. B. Reed, J. Blurton, and H. T. Bell, all Villa Grove owners; claim 1500x300 feet; situated in Steele's Gulch, Blake district, seven miles from Villa Grove, and located in 1883; vein a fissure, four feet wide, pay streak fifteen inches, containing gray copper and galena, assaying eighty ounces silver per ton in a quartz gangue; developed by a shaft twenty-five feet deep.

**Ocean Wave.**—300x1500 feet; situated on the north side of Cottonwood Gulch, six miles south of Crestone, Sangre de Christo district; located in March, 1882; owners J. E. Doherty, Telluride, J. W. Jones, Tomichi, and William Morehead, Silver Cliff; vein a fissure five feet wide, containing gold and silver bearing quartz, assaying from $30 to $35 per ton; developed by one ten-foot-face open cut.



**Ozark.**—J. P. Torrence, Oriental, owner; claim 1450x300 feet; situated in Hayden Pass, one mile from Oriental, and twenty-seven miles from Saguache; located in 1880; vein probably a fissure, four feet in width, containing quartz and galena, assaying from $50 to $100 per ton; developed by a shaft seventy feet deep.

**Pacific.**—M. L. Rice, Oriental, and L. S. Stone, Westfield, N. Y., owners; claim 1500x300 feet; situated on Mount Albert, Blake district, one-half mile from Oriental, and twenty-five miles from Saguache; located in 1882; vein a fissure three feet wide, pay streak six inches, containing galena and gold-bearing quartz, assaying from $50 to $100 per ton; developed by a shaft twenty-four feet deep.

**Paragon.**—George F. Reed, Pueblo, and Martin Hanson and L. W. Sharpe, both Bonanza, owners; claim 1400x300 feet; situated at the head of Rawley Gulch, Kerber Creek district, two and one-half miles from Bonanza; located in 1880; vein a contact thirty feet wide, pay streak from six to thirty-two inches, containing gray copper and galena in a quartz gangue, milling, when sorted, $40 per ton; developed by a tunnel eighty feet long, intersecting the Union tunnel 165 feet in length, and 200 feet of drifts at a depth of 250 feet from the surface.

**Paris.**—John Robar, Thomas Thompson, and Frank Kneemyer, all Bonanza, owners; claim 1500x300 feet; situated a quarter of a mile from Bonanza, in the Kerber Creek district; located in 1881; vein a contact six feet wide, pay streak from eight to twenty-two inches, containing galena in a quartz gangue, milling, when sorted, from $25 to $50 per ton; developed by a shaft eighty-five feet deep.

**Pay-master.**—A. F. Carlson and A. Anderson, both Sedgwick, owners; claim 1500x300 feet; situated in Greenback Gulch, three miles south-east of Bonanza; located in 1881; vein a fissure three and one-half feet wide, pay streak sixteen inches, containing copper pyrites and stephanite, assaying sixty-four ounces silver per ton, in a quartz gangue; developed by two shafts fifty by sixty feet in depth.

**Peerless.**—(See Henrietta and Peerless.)

**Peoria.**—J. A. Marsh, J. Collins, O. J. Seay, and H. H. Loether, all Bonanza, owners; claim 1200x175 feet; situated on Round Mountain, Kerber Creek district, four miles from Bonanza, and located in 1881; vein a contact six feet wide, pay streak from one-eighth to six inches, containing galena, bismuth, and iron, assaying from 20 to 13,000 ounces silver per ton, in a quartz gangue; developed by a shaft fifteen feet deep and a tunnel 105 feet long.

**Phœnix.**—W. P. Vanallstein and Andrews Bros., all Bonanza, owners; claim 1500x300 feet; situated on Round Mountain, Kerber Creek district, and located in 1881; vein a contact four feet wide, containing quartz and galena, assaying $25 per ton; developed by a tunnel fifty feet long.

**Pine Bark.**—N. P. White, W. M. Clark, and Wm. Huston, all Bonanza, owners; claim 1500x300 feet; situated in Copper Gulch, Kerber Creek district, two miles from Bonanza, and located in 1880; vein a contact twelve feet wide, pay streak thirty inches, containing galena, copper, zinc blende, and antimonial silver, assaying forty per cent lead and twenty-two ounces silver per ton, in a quartz gangue; developed by a tunnel 180 feet in length, and a shaft fifty-nine feet in depth, with some other workings.

**Pride.**—L. H. Rose and S. Forney, both Bonanza, owners; claim 1500x300 feet; situated on Round Mountain, Kerber Creek district, six miles from Bonanza, and located in 1882; vein a contact four feet wide, pay streak fifteen inches, containing galena, assaying $197 per ton, in a quartz gangue; developed by a shaft twenty-one feet deep.

**Pride of the West.**—Wm. Hudson, Geo. Botts, Geo. Young, and W. Dorman, all Bonanza, owners; claim 1500x300 feet; situated on Round Mountain, Kerber Creek district, five miles from Bonanza, and located in 1881; vein a contact twelve feet wide, pay streak fourteen inches, containing quartz and galena, assaying from twenty to seventy-five ounces silver per ton; developed by a forty-foot shaft.

**Quaker City.**—J. M. Bechtel, Bonanza, owner; claim 1500x150 feet; situated in Copper Gulch, Kerber Creek district, one-fourth mile from Bonanza, and located in 1882; vein a contact four feet wide, pay streak from three to eighteen inches, containing galena, assaying 100 ounces silver per ton, in a quartz gangue; developed by a tunnel on the vein 186 feet long, with some other workings.

**Queen City.**—Geo. Loughts and Wm. Smith, both Claytonia, owners; claim 1500x300 feet; situated on Home-stake Mountain, and on the north fork of Little Kerber Creek, Ford Creek district, twelve miles from Saguache, and located in 1881; vein a fissure five feet wide, pay streak from six to eighteen inches, containing gold-bearing quartz, assaying $50 per ton; developed by a seventy-foot shaft.

**Radcliffe Group.**—(See Little Jennie Mining Company.)

**Rainbow Group.**—Wm. V. Royster and J. G. Hazard, both Saguache, owners; group comprises the Rainbow, Rainbow Extension, Durango, and Copper Prince lodes, 1500x300 feet each; situated at the head of Rawley's Gulch, Kerber Creek district, four miles from Bonanza, and located in 1880; veins all fissures from three to nine feet in width, pay streaks from three to eighteen inches, containing galena and gray and yellow copper, assaying from $20 to $40 per ton, in a quartz gangue; developed by a tunnel fifty feet long and some other workings.

**Rawley, Demming, and Arrington.**—W. P. Linn, Denver, and N. S. Hurd, Bonanza, owners; claims 1500x300 feet each; situated in Rawley's Gulch, Kerber Creek district, two miles from Bonanza; veins all fissures from ten to forty feet wide, pay streaks from six to thirty-three inches, containing quartz, with galena and copper, milling, when sorted, four per cent lead and thirty-five ounces silver per ton; developed by two adits 250 feet long each and two shafts sixty and eighty feet in depth; output 1,200 tons.

**Revenue.**—1500x300 feet; situated on Exchequer Mountain, adjoining the Arkansas, one mile from Bonanza; vein a contact, varying in width, and containing galena, crystallized lead, and lead carbonates, with some sulphurets, and quartz carrying galena, pyrites, and gray copper, milling, when sorted, from $50 to $100 per ton; developed by a considerable amount of drifts and shafts, showing large ore-reserves.

**Rover.**—1500x300 feet; situated in the Kerber Creek district, near Bonanza; vein a contact, varying in width, pay streak thirteen inches, containing galena and lead carbonates, assaying fifty per cent lead and seventy-five ounces silver per ton, in a decomposed gangue, as shown by a ten-foot discovery shaft, in addition to which a tunnel is being run to intersect the vein at great depth, and in its course cutting another vein containing galena and blende, assaying fairly in silver.



**San Luis Gold Mining and Milling Company (The).**—Incorporated under the laws of Colorado; capital stock $300,000, in 10,000 shares of $30 each, non-assessable; president, D. B. Sculley; vice-president, C. A. Swain; secretary, G. W. Barnard; treasurer, S. E. McDowell; superintendent, Frank Swain; offices Chicago, Ill., and Sangre de Christo; owns the Eastern Star lodes, covering 3000x300 feet; situated on Gold Mountain, New Eldorado district, near Sangre de Christo, and twenty-eight miles from Saguache; vein a fissure, varying in width, pay streak from four to twenty-four inches, containing gold-bearing quartz, milling, when sorted, $30 per ton; developed by an adit 110 feet long and a shaft fifty feet deep.

**Sardine.**—J. D. Baldwin and W. F. Thomas, both Bonanza, owners; claim 1500x300 feet; situated in Rawley's Gulch, Kerber Creek district, two and one-half miles from Bonanza, and located in 1882; vein a contact two and one-half feet wide, pay streak sixteen inches, containing iron and lead carbonates, assaying forty per cent lead and seventy ounces silver per ton; developed by a twenty-four-foot shaft.

**Sedalia.**—Mrs. Frank Walter, M. F. McKee, and D. C. A. Brown, all Villa Grove, owners; claim 1500x300 feet; situated on Rawley Mountain, at the head of Rawley's Gulch, Kerber Creek district, three miles north-east of Bonanza; vein probably a fissure, varying in width, and containing gray copper and galena, assaying forty ounces silver and one-half ounce gold per ton, in a quartz gangue; developed by a shaft forty feet deep.

**Sexton.**—(An extension of the Dhaunic); Ernest Miller and W. L. Cooper, both Bonanza, owners; claim 1500x300 feet; situated on Grouse Hill, three miles from Bonanza; vein a contact, with similar characteristics to the Dhaunic; developed by one twenty-foot shaft.

**Silver King.**—F. R. Spencer and H. E. Aylsworth, both Bonanza, owners; claim 1500x300 feet; situated in Copper Gulch, one-half mile east of Bonanza, and located in 1881; vein a contact two feet wide, containing quartz impregnated with lead and iron oxides and pyrites, assaying some gold and forty-three ounces silver per ton; developed by one fifty-six-foot shaft and some other workings.

**Silver Strand.**—W. E. Brindle, Oriental, owner; claim 1500x300 feet; situated in Hunter Pass, one mile from Oriental and twenty-five miles from Saguache; located in 1881; vein a contact four feet wide, pay streak from two to twelve inches, containing galena, assaying 160 ounces silver per ton, in a quartz gangue.

**Sitting Bull Group.**—L. B. Schwanbeck, Saguache, and Wm. Maul, Villa Grove, owners; group comprises the Sitting Bull, Early Bird, and First Degree lodes, 1500x300 feet each; situated in the Blake district, five miles from Villa Grove, and located in 1880 and 1881; vein a contact four feet wide, containing galena and gray copper, assaying from 50 to 150 ounces silver per ton, in a quartz gangue; developed by three shafts from ten to thirty feet in depth.

**Sosthemus.**—John Robar and Daniel Haley, both Bonanza, owners; claim 1500x300 feet; situated in Hamilton Gulch, Kerber Creek district, two miles from Bonanza, and located in 1882; vein a contact five feet wide, pay streak from six to twenty-two inches, containing galena and gray copper, assaying from 80 to 400 ounces silver and some gold per ton, in a quartz gangue; developed by a tunnel seventy-five feet long.

**Sour Mash.**—John O'Hara, Luke Smith, and J. M. Roberts, all Bonanza, owners; claim 1200x300 feet; situated on the divide between Copper

and Rawley Gulches, three miles from Bonanza, and located in 1881; vein a contact three and one-half feet wide, pay streak from six to twenty-two inches, containing galena and spar, assaying twenty-five per cent lead, from eighteen to thirty ounces silver, and four-tenths ounce gold per ton; developed by a shaft seventy feet deep.

**St. Julian, Galena Belle, and Hancock.**—John Parsons and Norman McLane, both Villa Grove, owners; claims 1500x300 feet each; situated in the Kerber Creek district, three miles east of Bonanza, and located in 1880 and 1882; veins probably fissures, from one to two feet wide, containing quartz with galena, assaying ten per cent lead and forty ounces silver per ton; developed by sixty feet of shafts.

**St. Julian and Iroquois.**—C. C. Critz and C. W. Grant, both Bonanza, owners; claims 1500x300 feet each; situated in the Tuttle Creek district, five miles from Bonanza, and located in 1881; veins both fissures six feet wide, pay streaks eighteen inches, containing gold and silver bearing quartz, milling $92 per ton; developed by two shafts twenty and forty-eight feet in depth.

**Sunnyside Group.**—Comprising the Sunnyside, Dixie, and Charm; W. R. Winsted, Exchequer, owner; claims 1500x300 feet each; situated in Rawley's Gulch, one and one-half miles from Bonanza, and located in 1881 and 1882; vein a contact, from two to six feet in width, pay streak eighteen inches, containing galena and copper, assaying thirty ounces silver per ton, in a quartz gangue; developed by sixty feet of shafts.

**Superior Group.**—D. J. McIntosh & Co., Bonanza, owners; comprises the Superior, Erie, Pacific, and Atlantic lodes, 1500x300 feet each; situated on Superior Mountain, Kerber Creek district, three miles from Bonanza, and located in 1880; veins all contacts, from five to ten feet wide, pay streaks from five to forty-five inches, containing galena, gray copper, and antimonial silver, assaying from $20 to $400per ton, in a quartz gangue; developed a by a shaft 120 feet deep and a tunnel seventy-five feet long.

**Townsend Group.**—Dobson, Allen & Co., Bonanza, owners; group comprises the Townsend, Tip-top, and Monsoon lodes, 1500x300 feet each; and Bessie D. tunnel, 3000x6 feet; situated on Rawley Hill, two miles from Bonanza, Kerber Creek district, and located in 1880 and 1881; veins all contacts, from five to ten feet in width, containing yellow copper and galena in a quartz gangue, milling, when sorted, twenty-five per cent copper and seventy ounces silver per ton; developed by a shaft twenty-two feet deep and a tunnel 275 feet long, with some other workings.

**Union Tunnel.**—(See Eureka.)

**Villa Grove Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president, B. Fisher; vice-president, Thos. H. Norton; secretary, W. W. Gilchrist; treasurer, Alex. Laing; superintendent, James McLean; offices 1,614 Market street, Wheeling, West Virginia, and Villa Grove; owns the Anna lode, 1500x300 feet; situated on the north slope of Mt. Schilling, near Steele's Cañon, Blake district, twenty-five miles from Saguache; vein a fissure, seven feet wide, pay streak from six to twenty-two inches, containing quartz with oxide of copper and native silver, assaying 700 ounces silver per ton; developed by a tunnel 110 feet in length.



**Wanderer.**—Otto Mears and others, Saguache, owners; claim 1500x300 feet; situated on Gordon Mountain, Ford Creek district; located in 1880; vein a fissure, four feet wide, pay streak eighteen inches, containing antimonial silver and iron, assaying from 10 to 160 ounces silver per ton; developed by a shaft 40 feet deep.

**Whale Group.**—L.G. Combs and L. Lloyd, Bonanza, owners; group comprises seven claims, 1500x300 feet each; situated in Rawley's Gulch, Kerber Creek district, and located in 1881; vein a contact, from four to eight feet wide, pay streak from six to thirty-three inches, containing galena and copper in a quartz gangue, milling, when sorted, $63 per ton; developed by a shaft 100 feet deep, a tunnel 100 feet long, and 200 feet of levels; output $10,000.


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# San Juan County.

This County is situated in the heart of the great range from which it derives its name, and is bounded on the north by San Miguel, Ouray, and Hinsdale, on the east by Hinsdale, on the south by La Plata, and on the west by Dolores and San Miguel Counties. It has an estimated population of 6,000, with Silverton (county seat) pleasantly located in Baker's Park, on the Animas River, at an altitude of 9,400 feet, surrounded by lofty mountains, and Howardsville, Eureka, Animas Forks, Mineral Point, Chattanooga, and Red Mountain City as its principal towns. It covers an area of 407 square miles, a territory well watered and timbered, and filled with inexhaustible resources of low-grade and medium mineral.

The geological features are not materially different from those of Ouray and San Miguel Counties, the core of the range consisting of metamorphic, archaen, and granitic rocks, the latter possibly of igneous origin. The metamorphic strata, exhibiting, as they do, planes of bedding, are tilted at an angle of from sixty to seventy-five degrees, the entire series comprising quartzites, hornblende-schists, mica-schists, and slates, the quartzites, however, largely predominating. On the western slope of the range a series of conformable strata, included between the base of the Carboniferous and the summit of the Cretaceous, with red and gray sandstone layers predominating, overlie the metamorphic nucleus, and in the north-western portion of the County a group of sedimentary rocks occur, probably referable to the Devonian and Silurian age. On the eastern slope exposures of the sedimentary beds rarely occur, there being nothing other than the eruptive rocks of the Tertiary overflow, which covers the greater portion of the main range, occasionally aggregating from 4,000 to 6,000 feet in thickness. In Ouray County several hundred feet of the Tertiary age are found sandwiched between the mesozoic and eruptive strata.

The veins are generally fissures, originating in the archaen rocks, and passing up through the eruptive to the surface, with strong and distinct out croppings, sometimes traceable for miles, and varying in width from a few inches to over 100 feet (averaging about five feet), with pay streaks from one to four feet. The ores consist of galena, zinc blende, iron and copper pyrites, gray copper, massive enargite, and bismuth, with ruby, brittle, and native silver, and sometimes silver glance, in a quartz gangue, and are mainly adapted to the smelting process. Their value varies from $50 to $75 per ton, although portions gave returns from $150 to $300 by car-load lots.

The Denver & Rio Grande Railway was completed to Silverton, July 13, 1882, a circumstance which has exerted a remarkable influence upon the mining industry of the County, as shown by the consignments of ore from the advent of the railroad to the close of November, which were 4,620 tons, besides about 2,000 tons purchased by the local works. In addition to the rail connection and the wagon roads, which are exceptionally good, a number of smelting and concentrating works have recently been built. These substantial accessories, together with the many rich mineral discoveries in which the



citizens of the County are directly interested, notably those of Red Mountain (see introduction to Ouray County), have inaugurated a period of progress and prosperity hitherto unknown in that section.

**Abbie Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president and manager, Henry Crow; secretary and treasurer, F. Oscar Reuter—both Denver; owns t claims, 300x1500 feet each, viz., Belcher, Grand Central, Little Abbie, La Helen, Long Branch, Crescent, Climax, Tunnel, Merrimac, and Head-ligh situated on the Picayune Gulch slope of Eureka Mountain, about two miles from Animas Forks, Eureka district; located in 1875, and in process of patent; veins all fissures, the first four claims on the same vein, a very large one co taining quartz carrying galena, gray copper, antimony, black sulphurets, chl rides, and bromides, assaying from 10 to 400 ounces silver per ton, the o appearing in streaks, but the entire vein is mineralized; the developments consisting chiefly of open cuts and shafts and one cross-cut tunnel 330 feet long, designed to cut the vein at a depth of 165 feet; and the veins in the oth claims either intersecting or issuing from the main vein, some of them contai ing fair mineral bodies, but have little development.

**Ada.**—300x1500 feet; situated on the east slope of Tower Mountain, three-quarters mile south of Eureka, Eureka district; located in 1877; owne B. F. Ferguson, Eureka, and M. E. Hamilton, Caddo, Bent County; vein fissure six feet wide, with three pay streaks, aggregating twelve inches i width, and containing galena, gray copper, and yellow copper, assaying twenty per cent lead and from seventy to eighty-five ounces silver per ton; developments—one twenty-five-foot tunnel on the vein.

**Acton.**—(See Mulvey Group.)

**Addie S.**—300x1500 feet; situated on the west side of Mineral Gulch, one-fourth mile south of Red Mountain City, Red Mountain district; locate in March, 1883; owners Alfred Iles, Silverton, and W. J. Shiek, Denver; vei probably a fissure, thirty feet wide, containing ten feet of galena and arsenic copper in a quartz gangue, milling, when sorted, twenty per cent lead and fifteen ounces silver per ton; developed by a ten-foot-face cut and a twenty-foot tunnel, designed to cut the vein at a depth of sixty feet.

**Adele.**—300x1500 feet; situated on the top of Treasure Mountain, on mile south-west of Animas Forks, Eureka district; located in 1881; owner I. V. Wheat, Detroit; vein a fissure from 100 to 300 feet wide, and where worked shows considerable mineral, on which assays have been obtained as high as 50 ounces silver and 15 ounces gold per ton; developments—three open cuts, wit ten-foot faces each.

**Alaska Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1879; capital stock $2,000,000, in 80,000 share of $25 each, non-assessable; president, Lyman Strong; vice-president, J. T Wamelink; secretary, E. Tupper; treasurer, Jesse N. Squire; general manage Alfred A. Hard—all Cleveland, O.; offices 376 Superior street, Cleveland, and at mines; owns four claims, 300x1500 feet each, viz., Alaska and Acapulca, two adjoining claims on the same vein; vein a fissure sixteen feet wide, pa streak from twelve to seventy-five inches, and probably averaging thirty inche containing bismuth, antimonial silver, and black sulphurets, milling some times as high as thirty per cent bismuth and some galena, yielding, when sorted, probably an average of 400 ounces silver per ton, the first-class ore milling 1,000 ounces, the second-class from 300 to 400 ounces, and the third class from 100 to 125 ounces silver per ton; developed by one shaft 140 fee deep and 450 feet of drifting; both situated in Poughkeepsie Gulch, eleven mile

north of Silverton, Uncompahgre district, and patented in 1880; Victory situated three-quarters mile from the Alaska, further down the gulch, same district, and patented in 1880; vein a fissure fifteen feet wide, pay streak seven feet, containing galena, antimonial silver, and black sulphurets, in a decomposed gangue, milling, when sorted, 150 ounces silver per ton; developed by two open cuts, with fifteen-foot faces each; and Adelphi, situated at the head of Cement Creek, ten miles north of Silverton, Eureka district, and patented in 1880; vein a fissure six feet wide, containing black sulphurets in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by two shafts 150 feet deep each, connected with each other by a 200-foot drift; output of the entire property from $125,000 to $150,000.

**Alpha.**—(See Queen Anne.)

**Alexander and Silver State.**—Two claims, 300x1500 feet each; situated on the west slope of Hurricane Peak, nine and one-half miles north of Silverton, Eureka district; located in June, 1882; owners W. D. Aley and Alfred Iles, both Silverton; veins both fissures, six and fifty feet wide, pay streak in the Alexander five feet, three feet of which is gray copper and antimonial silver in a quartz gangue, and the other two feet galena in quartz, milling, when sorted, forty per cent lead and fifty ounces silver per ton; developments—two tunnels sixty and sixty-five feet long on each lode, respectively.

**Alice Group.**—Four claims, 300x1500 feet each; situated on the west slope of Red Mountain, five miles north-west of Silverton, Red Mountain district; located in March, 1883; veins all fissures, in the Alice six feet wide, pay streak eighteen inches, containing galena, assaying thirty-five per cent lead and twenty-five ounces silver per ton, in a quartz gangue; developments—one shaft twenty feet deep; in the Bullion three feet wide, containing mineralized quartz; developments—one twelve-foot shaft; in the Meadow ten feet wide, containing quartz with galena; developments—one ten-foot-face cut; in the Florida six feet wide, containing mineralized quartz; developments—one fifteen-foot tunnel crossing the vein; owner James Burrows, Silverton.

**Alice, Mt. Vernon, and Yellow Jacket.**—Three claims, 300x1500 feet each; situated on the south slope of Eureka Mountain, one-fourth mile west of Eureka, Eureka district; located in 1873 and 1874; owners Jno. D. Niswonger and Fred. Blaisdell, both Eureka; veins all fissures, in the Alice five feet wide, pay streak from two to twelve inches, containing galena and yellow copper, assaying from 11 to 100 ounces silver per ton, in a quartz gangue; developed by a sixty-foot tunnel on the vein; in the Mt. Vernon four feet wide, pay streak twelve inches, containing iron pyrites and gray copper, assaying at the surface $60 per ton in silver, in a quartz gangue; developed by a tunnel 140 feet long, cutting the vein 100 feet deep, and one ten-foot face cut; in the Yellow Jacket twelve feet wide, pay streak twenty-four inches, containing iron pyrites and gray copper, assaying sixty ounces silver per ton, in a quartz gangue; developments—one eighteen-foot shaft, and the Mt. Vernon tunnel will cut this vein in twenty feet more at a depth of 160 feet.

**Alleghany Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president and manager, C. Reiter, Taylor City; vice-president, D. W. Badey; treasurer, Thomas McHenry—both Alleghany City, Pa.; secretary, James Godfrey, Pittsburgh, Pa.; office Taylor City; owns the Ocean Wave and Little Maud lodes, 1500x300 feet each; situated on Lake Mountain, Eureka district, sixteen miles from Silverton; located in 1879; veins both fissures, two feet wide, pay streaks from five to fifteen inches, containing galena, assaying from thirty-five to seventy-five ounces silver per ton, in a quartz gangue; developed by two shafts ten and twenty feet in depth.



**Allen and Leonard.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west slope of Tower Mountain, two miles north-east of Silverton, Animas district; located in March, 1882; owners Wm. Leonard, M. W. Williams, and D. Allen, all Silverton; vein a fissure, four and one-half feet wide, pay streak twenty inches, containing galena, assaying twenty per cent lead and sixty-five ounces silver per ton, in a quartz gangue; developments—two open cuts with fifteen-foot faces, one on each claim.

**Alligator and Monarch.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the east slope of California Mountain, one mile west of Animas Forks, Eureka district; located in 1881; owners Chas. McLoyd, I. K. Machiner, and A. P. Creswell, all Animas Forks; vein a fissure, twenty feet wide, containing three pay streaks, fourteen, eight, and ten inches wide, respectively, of galena and iron pyrites, assaying from ten to thirty-six ounces silver and some gold per ton, in a quartz gangue; developments—one open cut and tunnel thirty feet long, twenty feet of which is under cover on the Alligator, and one ten-foot-face open cut on the Monarch.

**Alvarado.**—300x1500 feet; situated on the east side of Poughkeepsie Gulch, eight miles south-east of Ouray, Uncompahgre district; located in July, 1880; owner Luther Harris, Ouray; vein a fissure five feet wide, pay streak eighteen inches, containing galena, gray copper, and quartz, assaying fifty ounces silver per ton; developed by one tunnel thirty feet long.

**America.**—300x1500 feet; situated on the east slope of Sultan Mountain, two miles south of Silverton, Animas district; located in 1880; owners Frank and Andrew Robbins, W. H. Thomas, and A. L. Calhoun, all Silverton; vein a fissure four feet wide, pay streak five inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty per cent lead and fifty ounces silver per ton; developed by one twenty-five-foot drift.

**American.**—300x1500 feet; situated on the top of Lake Mountain one-fourth mile east of Mineral Point, Eureka district; patented in 1883; owners W. G. Luckett, John H. Maugham, and A. E. Reynolds, all Lake City; vein a fissure three feet wide, pay streak twenty-two inches, containing galena and iron and copper pyrites, with some gray copper, in a quartz gangue, milling, when sorted, twenty-five ounces silver per ton; developed a thirty-eight-foot shaft.

**American Boy.**—300x1500 feet; situated on the south slope of Round Mountain, four miles north-east of Silverton, Animas district; located in 1879; owners H. E. MaCarey and Anson H. Bridgman, both Silverton, and Lorraine Reed, Lowville, N. Y.; vein a fissure four feet wide, pay streak twelve inches, containing galena, assaying fifty-five per cent lead and forty ounces silver per ton, in a quartz gangue; developed by one thirty-foot tunnel.

**American Flag.**—300x1500 feet; situated on the north-east slope of Sultan Mountain, two and one-half miles south of Silverton, Animas district; located in March, 1883; owner Hugh Davis, Silverton; vein a fissure, pay streak twelve inches, containing galena and zinc in a quartz gangue; developments—one ten-foot-face cut.

**Anchor.**—300x1500 feet; situated in Cleveland Gulch, four miles south-east of Animas Forks, and eight miles west of Sherman, Eureka district; located in 1878; owned by E. A Williams, Animas Forks; vein a fissure, fifteen feet wide, pay streak twenty-four inches, containing galena, assaying twenty-five per cent lead and 100 ounces silver per ton, in a quartz gangue; developments—three open cuts with ten-foot faces each, all on the vein.

**Anchor.**—300x1500 feet; situated in Prospect Basin, six miles north o Silverton, Red Mountain district, and located in September, 1882; owners J. W. Fleming, Silverton, Geo. Howard and Thomas Gill, both Red Mountain Town; ore body probably a deposit, a shaft fourteen feet deep showing galena and black copper in a porphyry gangue, milling, when sorted, $35 per ton, in silver, copper, and lead.

**Anchor No. 2.**—300x1500 feet; situated in Ohio Gulch, three miles north-west of Silverton, Animas district; located in 1879; owners Fred. C. Sherwin and Peter Houghton, both Silverton; vein a fissure, pay streak twenty-four inches, containing galena in a quartz gangue, milling, when sorted, thirty per cent lead and thirty ounces silver per ton; developed by a tunnel forty feet long.

**Animas Forks Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois, March, 1882; capital stock $1,00,000, in 100,000 shares of $10 each, non-assessable; president, C. O. Boring; secretary, J. B. Patterson; owns two claims, 300x1500 feet each, viz., Yellow Rose Extension, situated on the west slope of Wood Mountain, three-fourths of a mile east of Animas Forks, Eureka district, and in process of patent; vein a fissure varying in width, and containing galena, gray copper, and iron and copper pyrites in a quartz gangue, yielding fairly; and Marion, adjoining the Yellow Rose Extension; vein a fissure varying in width, and containing galena and gray copper in a quartz gangue, assaying fairly; developments considerable.

**Anna Crooke.**—(Extension of the Pride of Syracuse); 300x1500 feet; situated on the top of Engineer Mountain, three miles west of Rose's Cabin, Uncompahgre district, and patented in 1882; owners Jno. J. Crooke and Henry A. Wood, both Lake City; vein a fissure eight feet wide, pay streak thirty-six inches, containing galena, gray copper, and sulphide of bismuth in a quartz gangue, milling, when sorted, eighty ounces silver per ton; developments—one fifteen-foot shaft, one fifteen-foot-face cut, and several openings on the vein.

**Annetta.**—(See Waterfall Group.)

**Annie Wood.**—300x1500 feet; situated on the top of Engineer Mountain, three miles west of Rose's Cabin, Uncompahgre district, and patented in 1881; owners Jno. J. Crooke and Henry A. Wood, both Lake City; vein a fissure five feet wide, pay streak from eight to twenty inches, containing brittle silver and bismuth silver in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by a 600-foot level, showing mineral all the way.

**Arctic.**—300x1500 feet; situated on the Swansea Gulch slope of Kendall Mountain, one and one-fourth miles east of Silverton, Animas district, and located in November, 1877; owners H. P. Roberts, Silverton, and Michael Dowd, Ames; vein a fissure six feet wide, pay streak twenty-eight inches, containing galena and gray copper, assaying twenty per cent lead, and forty ounces silver per ton, in a quartz gangue; developed by one sixty-foot drift and one cross-cut twenty-five feet long.

**Argentine and Comstock.**—Two adjoining claims on the same vein; 300x1500 feet each; situated in Arastra Gulch, four miles north-east of Silverton, Animas district; owners J. T. Brewer and Johnson Burrett, both Silverton; vein a fissure twelve feet wide, containing quartz carrying silver, which assays from $15 to $20 per ton; developed by one drift thirty feet long.

**Ariadne.**—300x1500 feet; situated on the west slope of Boulder Mountain, four miles north of Silverton, Animas district, and located in May,



1881; owners W. D. Aley and Alfred Iles, both Silverton; vein a fissure ten feet wide, pay streak eighteen inches, containing galena in a quartz gangue, milling, when sorted, forty-five per cent lead and thirty ounces silver per ton; developments—one tunnel sixteen feet long and two open cuts with ten-foot faces each.

**Aspen Group.**—Eight claims, viz.: Aspen, 50x1600 feet, and Susquehanna, McGregor, Prospector, Legal Tender, Mammoth, John Bull, and Chloride, 300x1500 feet each; situated on the east slope of Hazleton Mountain, two and one-half miles east of Silverton, Animas district; the first four located in 1873 and the others subsequently, and all patented; owner the San Juan and New York Mining and Smelting Company (see La Plata County); veins all fissures, the principal one (the Aspen) four feet wide and the others from three to forty inches, containing galena and some gray copper in a quartz gangue, the mineral appearing in seams of varying width (from one to twenty-four inches), the galena streaks being fairly continuous and the gray copper generally free from gangue, milling, when sorted, forty-five per cent lead and ninety ounces silver per ton, although the first ore shipped milled considerably higher; developed by one main tunnel 2,000 feet long, with shafts and winzes connecting with the surface, and a cross-cut 800 feet long, intersecting the Aspen and other veins, the entire under-ground workings aggregating nearly one and one-half miles in length; improvements—buildings, machinery, etc.

**Atlanta.**—300x1500 feet; situated on the west slope of Wood Mountain, one-half mile north of Animas Forks, Eureka district, and located in July, 1880; owner Henry Ludwig, Animas Forks; vein a fissure three feet wide, pay streak twenty-four inches, six inches of which is solid galena, assaying from fifty to sixty per cent lead and from forty to fifty ounces silver, and the other eighteen inches, containing iron pyrites, gray and yellow copper, and lead carbonates, in a quartz gangue, assaying from thirty to forty ounces silver per ton; developments—one thirty-three-foot open cut and tunnel, eighteen feet of which is under cover.

**Bayard.**—(See Thomas F. Bayard.)

**Beaton Silver Mining Company.**—Owns five claims, 300x1500 feet each, viz.: Tantalleon, Trenmore, Occident, Artois, and Livingstone; situated in Minnie Gulch, between Howardsville and Eureka; veins all fissures, varying in width, and containing a quartz gangue and vein-matter and a galena and gray copper ore, yielding fairly; developments—over 1,000 feet of work, exposing large ore bodies.

**Bee-hive.**—300x1500 feet; situated on the east slope of Tower Mountain, one-fourth mile west of Howardsville, Animas district; located in March, 1879; owners Louis Meyer and Albert Brendle, both Howardsville, Gottlieb Schied, Silverton, and B. E. Sanford, Sheboygan Falls, Wis.; vein a fissure two and one-half feet wide, containing galena, iron pyrites, and gray and yellow copper, assaying forty-two ounces silver per ton, in a quartz gangue; developments—one tunnel eighty-seven feet long and three openings on the vein.

**Belcher Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $125,000, in 5,000 shares of $25 each, non-assessable; agent, F. E. Horton, Silverton, who represents the Board of Directors residing in London, Eng.; owns two adjoining claims on the same vein, 300x1500 feet each, viz.: Belcher No. 1 and Belcher No. 2; situated on the north slope of Sultan Mountain, two and one-half miles south of Silverton, Animas district, and patented in 1882; vein a fissure four feet wide, average pay streak fifteen inches, containing galena in a quartz gangue, milling, when

sorted, thirty per cent lead and fifty ounces silver per ton; developed by four drifts aggregating 1,300 feet in length, with some other workings and improvements; output 400 tons.

**Belcher, Silver Gray, and Yellow Jacket.**—The two first adjoining claims on the same vein and the last parallel, 300x1500 feet each; situated at the head of Cascade Basin, fourteen miles south-west of Silverton, Animas district, and located in July, 1882; owners Paul Rodenhouse, Silverton, and Jno. Ashfield and M. A. Bean, both Rico; veins both fissures, four feet wide each, pay streak eighteen and twenty inches, respectively, containing sulphurets, gray copper, and some galena, in a quartz gangue, milling, when sorted, 130 ounces silver per ton, and without sorting, sixty-nine ounces silver per ton; developments—two shafts fifteen feet deep each and three open cuts with faces from ten to twenty feet.

**Belle Conklin.**—300x1500 feet; situated on the east slope of Sultan Mountain, two miles south of Silverton, Animas district, and patented in 1882; owners J. T. Brewer and Frank Riddell, both Silverton; vein a fissure six feet wide, pay streak eighteen inches, containing gold and silver bearing quartz, assaying from $50 to $75 per ton; developed by a level seventy-five feet long and a shaft fifteen feet deep.

**Belle of the Animas.**—300x1500 feet; situated on the Animas slope of Jones Mountain, two miles east of Eureka, Eureka district, and located in 1881: owners Bernard Mallon, James Welsh, and Con. Burns, all Lake City; vein a fissure four feet wide, pay streak twenty inches, containing galena and gray copper, with some brittle silver, in a quartz gangue, milling, when sorted, from 100 to 200 ounces silver per ton; developed by a tunnel 150 feet long and a shaft fifty feet deep, with some other workings.

**Ben Butler.**—300x1500 feet; situated on Lake Mountain, near Mineral Point, Uncompahgre district, and in process of patent; owners Jas. L. Hill, New York City, and E. B. Greenleaf, Milwaukee; vein is a well defined fissure, varying in width, and containing galena and gray copper in a quartz gangue, yielding fairly; the developments consisting of assessment work.

**Bennie and Latimer Group.**—Eight claims, 300x1500 feet each; situated in the lower end of Poughkeepsie Gulch, twelve miles north of Silverton, Uncompahgre district, and located in 1879; veins all fissures, as follows: in the Silver King, eight feet wide, pay streak twenty-four inches, containing galena, gray copper, and iron pyrites, in a quartz gangue, milling, when sorted, forty per cent lead and sixty ounces silver per ton; developments—three open cuts with ten-foot faces each; in the Baltimore No. 1 and No. 2, two adjoining claims on the same vein, six feet wide, pay streak four feet, containing copper and iron pyrites in a quartz gangue, milling, when sorted, thirty-five per cent copper and 130 ounces silver per ton; developments—two open cuts with eighteen and ten foot faces, one on each claim; in the Auld Reekie eight feet wide, pay streak eighteen inches, containing iron and copper pyrites and galena in a quartz gangue, milling twelve per cent copper and ninety-seven ounces silver per ton, when sorted; developed by a twenty-foot tunnel and a fifteen-foot-face cut, and Glasgow (extension of Auld Reekie) is developed by the same workings; in the Stirling twelve feet wide, pay streak six inches, containing galena and gray copper, assaying fifty ounces silver per ton, in a quartz gangue; developments—two open cuts with ten and fifteen foot faces; in the Ben Franklin fourteen feet wide, pay streak eight feet, containing quartz with iron and copper pyrites, milling, when sorted, eighty-five ounces silver per ton; developed by a 100-foot tunnel and a twenty-foot-face cut; in the Gratio forty feet wide, pay streak eight feet, containing iron and copper pyrites and some galena in a quartz gangue, milling, when sorted, sixty



ounces silver per ton; developments—two open cuts with fifteen-foot faces each; and two five-acre mill sites, viz., Silver King and Ben. Franklin, adjoining the lode claims; owned by Andrew Bennie, Lake City (John Latimer, Gunnison City, and Wm. Patterson, Lake City, are owners in Baltimore No. 1, Silver King, Ben. Franklin, Auld Reekie, and Glasgow).

**Berdilla.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district; located in September, 1882, and in process of patent; owner M. I. Barker, Cincinnati, O.; agent, Perry Ellis, Silverton; vein a fissure three feet wide, pay streak twenty-four inches, containing galena, assaying six per cent copper, thirty per cent lead, and ten ounces silver per ton, in a quartz gangue; developed by one level 160 feet long, with some other workings.

**Bielefeldt Group.**—Five claims, 300x1500 feet each, lying parallel; situated on the north-east slope of Sultan Mountain, one and a quarter miles south of Silverton, Animas district; located in May, 1881; owners E. Bielefeldt, William Dennis, and John Rule, all Silverton, and Charles C. Priester, Davenport, Ia.; veins all fissures, as follows: In the North Star No. 3, vein eight feet wide, pay streak from eight to ten inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty-seven per cent lead, one-fifth of an ounce gold, and fifty ounces silver per ton; in the Little Willie two feet wide, containing mineralized quartz; in the Bielefeldt ten feet wide, pay streak from twenty-four to thirty inches, containing galena and gray copper, assaying $70 per ton, in a quartz gangue; in the Silver Wave four feet wide, containing mineralized quartz; in the Silver Wink ten feet wide, pay streak twenty inches, containing carbonized lead in a quartz gangue, milling, when sorted, $50 per ton; developed by one shaft on each claim from twenty to thirty feet deep, and a tunnel thirty-five feet long, started on the North Star No. 3, and designed to cut all the above veins.

**Big Four.**—300x1500 feet; situated on the west slope of Red Mountain, one-quarter of a mile north of Chattanooga, Red Mountain district; located in March, 1883; owners Samuel Barr, George Collins, and Thomas J. Kirwin, all Chattanooga; vein probably a fissure four feet wide, pay streak twelve inches, containing copper sulphates and iron pyrites in a quartz gangue; developments—one ten-foot-face cut.

**Bill Young.**—300x1500 feet; situated on the east slope of Mineral Point Mountain, at Mineral Point, Uncompahgre district; located in 1873, and patented; vein a fissure, with an outcrop of fourteen feet, and is one of the very few veins where a body of silver-bearing ore appeared at the grass roots, pay streak from ten to twenty inches, the richest portion of which is on the hanging-wall, containing gray copper, ruby silver, iron and copper pyrites, and other ores more or less rich, and assaying fairly, the vein-matter being gray and white quartz, brecciated in places with angular patches of a fine jaspery quartz, some of which is deeply stained with manganese; developments—one seventy-foot shaft and one sixty-foot open cut.

**Blue-bird.**—300x1500 feet; situated on the west slope of Red Mountain, at Red Mountain City, Red Mountain district; located in January, 1883, and in process of patent; owners J. C. Bates, Ophir P. H. O'Brien and J. N. Anderson, both Silverton, and James P. Odenkirk, Chattanooga; vein probably a fissure, five feet wide, containing galena and some arsenical copper in a quartz gangue, assaying fifteen per cent copper, twenty per cent lead, and thirty ounces silver per ton; developments—one fifteen-foot-face open cut.

**Black Hawk.**—300x1500 feet; situated on the west slope of Red Mountain, near the Congress mine, three-quarters of a mile south of Red

Mountain Town, Red Mountain district; located in December, 1882; owned by William Alley, Red Mountain Town, Charles G. Carlstram, Animas Forks, and Henry Miller and T. J. Andrews, both Eureka; ore body probably a deposit, a shaft thirty feet deep showing carbonates of copper and chlorides in a quartz gangue.

**Black Silver.**—300x1500 feet; situated on the top of Engineer Mountain, three miles west of Rose's Cabin, Uncompahgre district, and patented in 1883; owners Jno. J. Crooke and Henry A. Wood, both Lake City; vein a fissure three feet wide, pay streak twelve inches, containing arseniate of silver in a quartz gangue, milling, when sorted, 600 ounces silver per ton; developed by two shafts sixty and eighteen feet deep, with some other workings.

**Blacksmith.**—(On the Great American vein); 300x1500 feet; situated on Seigel Mountain, near Mineral Point, Uncompahgre district, and in process of patenting; owner James L. Hill, 240 Broadway, New York; vein a fissure, with the same general characteristics as the Great American; developments—one twenty-five-foot tunnel, showing a body of galena, gray copper, sulphurets, iron and copper pyrites, and some bismuth, in a quartz gangue, varying in width from ten to thirty inches.

**Blackstone and Carbonate King.**—Two claims, 300x1500 feet each; situated on Cement Creek, seven and one-half miles north of Silverton, Red Mountain district; located in 1881, and the former patented in 1883; owners Geo. W. Bayly, Silverton, and Wm. Bayly, Durango; veins both fissures, five and two and one-half feet wide, respectively, pay streaks thirty and ten inches, containing galena, assaying sixty per cent lead and twenty-five ounces silver per ton, in a quartz gangue; developments—one open cut with a twenty-five-foot face and a shaft at end of cut twenty-five feet deep, and two other shafts twenty feet deep each, on the first claim, and an open cut with thirty-foot face on the last; output ten tons.

**Blanche.**—300x1500 feet; situated on the west slope of Kendall Mountain, one mile east of Silverton, Animas district, and located in November, 1882; owners Wm. Leonard and Wm. H. Dean, both Silverton; vein a fissure five feet wide, pay streak twenty inches, containing galena, assaying forty per cent lead and sixty ounces silver per ton, in a quartz gangue; developed by an open cut and tunnel twenty feet long, ten feet of which are under cover.

**Bobtail, Dunderberg, and Terrible.**—Three parallel claims, 300x1500 feet each; situated on the north slope of Sultan Mountain, one mile south of Silverton, Animas district, and located in 1879, 1882, and 1879, respectively; the first owned by William, John, and Susan J. Moyle, and the two last by Susan J. Moyle, N. E. Slaymaker, and A. W. Hudson, all Silverton, and Jno. Sirrell, Rico; veins all fissures, in the first four feet wide, pay streak ten inches, containing iron pyrites and some galena in a quartz gangue; developed by a seventy-five-foot drift; in the second six feet wide, pay streak fifteen inches, containing steel galena, assaying twenty per cent lead and thirty ounces silver per ton, in a quartz gangue; developed by a tunnel 110 feet long, cutting the vein seventy-five feet deep; and in the third eight feet wide, pay streak twelve inches, containing iron and copper pyrites, with some galena, in a quartz gangue; developed by one open cut with an eighteen-foot face, a drift twelve feet long from end of cut, and a tunnel 220 feet long, designed to cut vein 350 feet deep.

**Bonanza Group.**—Seven claims, 300x1500 feet each; situated on the south slope of Seigel Mountain, two miles east of north from Animas Forks, Eureka district, and located in June, 1880; owners Oscar S. Olson,



Animas Forks, and Stanley Larson, Friendville, Neb.; veins all fissures, in the Silver Maid twelve feet wide, with three pay streaks averaging six inches in width each, containing galena and gray copper in a quartz gangue, milling, when sorted, fifteen per cent lead and sixty ounces silver per ton; developments—a twenty-three-foot shaft on the vein; improvements—a shaft and boarding house; in the Ruby Silver (extension of Silver Maid) twelve feet wide, containing mineralized quartz, assaying from 53 to 115 ounces silver per ton; developed by a twelve-foot shaft; in the Oriental nine feet wide, pay streak twelve inches, containing galena and yellow copper in a quartz gangue, milling, when sorted, twenty-five ounces silver and one ounce gold per ton; developed by an eighteen-foot shaft; in the Native Silver (extension of Oriental) nine feet wide, containing mineralized quartz; developed by a fourteen-foot shaft; in the Bonanza King six feet wide, containing mineralized quartz; developed by a fifteen-foot shaft; in the Rio Alto five feet wide, containing mineralized quartz; developed by a twelve-foot shaft; and in the Home-stake four feet wide, pay streak six inches, containing galena in a quartz gangue, milling, when sorted, eighteen ounces silver per ton; developed by a fifteen-foot tunnel and a ten-foot shaft.

**Bonanza Tunnel.**—(See Silver Peak Mining Company.)

**Bonita.**—300x1500 feet; situated in Ross Basin, nine miles north of Silverton, Eureka district, and in process of patent; owner L. W. Liscomb, Rico; vein a fissure ten feet wide, containing spar, with pockets of galena and gray copper, assaying sometimes as high as 500 ounces silver per ton; developed by one tunnel and two open cuts.

**Boone and Dutch Girl.**—Two claims, 300x1500 feet each, crossing each other; situated in Mill Gulch, six miles north-west of Silverton, Red Mountain district, and located in June, 1881, and in January, 1883, respectively; owner W. E. Stewart, Silverton; veins both fissures fifteen and four feet wide, pay streaks ten and seven inches, containing galena and decomposed matter, assaying in the first claim $50 per ton; developed by two open cuts with twenty-four and twelve foot faces, respectively.

**Boston and Charles Sumner.**—Two claims, 300x1500 feet each; situated on the east slope of Galena Mountain, two miles east of Eureka, Eureka district, and located in 1876; owner Fred. G. Helmboldt, Silverton; veins both fissures four feet wide each, pay streaks eighteen inches, containing galena, assaying forty per cent lead and fifty ounces silver per ton, in a quartz gangue; developed by two tunnels twenty-five and sixty feet long.

**Bonanza.**—(See Kalamazoo Bonanza Mining Company.)

**Boston and San Juan Mining Company (The.)**—Superintendent, C. H. Slocum, Morrisville, Vermont; owns the Cumberland, 300x1500 feet; situated on the north side of Mill Creek, one and one-half miles west of Chattanooga, Red Mountain district, and located in 1881; vein a fissure, five feet wide, pay streak eighteen inches, containing galena and copper, assaying twenty per cent lead and thirty-five ounces silver per ton, in a quartz gangue; developed by a drift seventy-five feet long.

**Boston Mining Company (The).**—Incorporated under the laws of New York; manager, W. M. Caldwell; office 102 Chambers street, New York; owns the Boston mine, 300x1500 feet; situated in Red Cloud Gulch, between Houghton and Mineral Point, Uncompahgre district; vein a fissure, varying in width, and pay streak from four to forty inches, containing quartz, gray copper, iron and copper pyrties, and zinc blende; the developments consisting of drifts, shafts, and cross-cuts and several other locations in the same vicinity.

**Boulder Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, C. S. O. Tinsman; vice-president, Andrew Hartipee; secretary, O. D. Lewis; treasurer, —— McLean; acting treasurer, A. B. Rutledge—all Pittsburgh, Pa.; manager, J. L. Day, Silverton; office corner Seventh Avenue and Smithfield street, Pittsburgh, and at Silverton; owns three claims, 300x1500 feet each, viz., Salem, Brooklyn, and North Star; situated in Boulder Gulch, three miles north of Silverton, Animas district; located in 1877, and in process of patent; veins all fissures, in the first and last mentioned ten and six feet wide, respectively, pay streaks from fourteen to twenty and six inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty-five per cent lead and sixty ounces silver per ton; developed, respectively, by three drifts, seventy-five, twenty, and twenty feet long, and one drift fifty feet long; and in the Brooklyn twelve feet wide, pay streak thirty inches, containing telluride ore in a quartz gangue, milling, when sorted, forty ounces silver and two and one-half ounces gold per ton; developed by a drift 100 feet long.

**Bounty.**—300x1500 feet; situated in Eureka Gulch, two miles north of Eureka, Eureka district; located in 1874, and in process of patent; owners Albert Bernard and W. J. Forsyth, both Howardsville; vein a fissure eighteen feet wide, with four pay streaks from six to forty inches, containing iron and copper pyrites, assaying eighty ounces silver per ton, in a quartz gangue; developments—one forty-foot shaft and an eighteen-foot drift from bottom of shaft.

**Bowery.**—(Extension of Idaho No. 2); 200x1500 feet; situated on the west slope of Kendall Mountain, one-fourth mile east of Silverton, Animas district; located in 1873, and patented in 1881; owner Eugene McCarthy, Silverton; vein a fissure six feet wide, pay streak from ten to fifteen inches, containing galena and gray and yellow copper, assaying thirty per cent lead, fifty ounces silver, and some gold per ton, in a quartz gangue; developed by two levels 800 and 60 feet long.

**British Queen.**—300x1500 feet; situated on Lake Mountain, one-half mile from Mineral Point, Uncompahgre district; vein a fissure, from five to ten feet wide, pay streak from one to six feet, containing galena, gray copper, and some brittle silver, in a quartz gangue, milling, when sorted, from fifty to seventy-five ounces silver per ton; developments—two shafts seventy-five and fifty feet in depth, and some drifting exposing large ore reserves, with 200 tons on the dumps.

**Bull Domingo.**—300x1500 feet; situated in Mill Gulch, six miles north-west of Silverton, Animas district; located in June, 1881; owners W. E. Stewart and D. Lockwood, both Silverton; vein a fissure three and one-half feet wide, containing a decomposed matter carrying lead carbonates, assaying $15 per ton; developments—one twenty-four-foot-face open cut.

**Bullion City.**—300x1500 feet; situated on the west slope of Middle Mountain, two miles north-east of Eureka, Eureka district; patented in April, 1883; owner Fred. G. Helmboldt, Silverton; ore body a deposit, from one to three feet thick, containing bog iron and supposed to underlie the entire claim; developed by one tunnel twenty-five feet long, one cut with a ten-foot face, and considerable ditching.

**Burns' Gulch Mining Company (The).**—Capital stock $100,000, in 10,000 shares of $10 each, non-assessable; vice-president, L. B. Kendall, Denver; secretary, Henry E. Hoyt, Kalamazoo, Mich.; general manager, Ed. M. Brown, Animas Forks; office Kalamazoo, Mich., and Animas Forks; owns the Sioux City, 300x1500 feet; situated in Burns' Gulch, one and three-fourths miles south of Animas Forks, Eureka district; located in 1876, and patented in 1879; vein a fissure four and one-half feet wide, pay streak eighteen inches, containing antimonial copper with galena and some zinc in a quartz gangue, milling, when sorted, twenty-five per cent copper, from forty to fifty-five ounces silver, and from one-half to one and one-half ounces gold per ton; developed by a cut eighteen feet long with a twelve-foot face and two drifts 265 and 500 feet long, all on the vein; output 150 tons.



**C. L. Rice.**—300x1500 feet; situated on the west slope of Tower Mountain, four miles north-east of Silverton, Animas district, and located in May, 1882; owners Thomas A. Gifford, Silverton, C. L. Rice, C. Huntington, S. W. Lyman, A. Worth, George Tyson, W. H. Almy, and others, Chicago; vein a fissure five feet wide, pay streak twelve inches, containing galena and tellurium, assaying fifty ounces silver and $60 in gold per ton, in a quartz gangue; developed by one level seventy-five feet long.

**Capital.**—300x1500 feet; situated at the head of Cascade Creek, fifteen miles south-west of Silverton, Animas district, and located in June, 1880; owner Garland H. Davison, Baltimore; agent, Geo. Wilson, Lake City; vein a fissure two and one-half feet wide, pay streak eighteen inches, containing galena, gray copper, and brittle silver, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by one open cut forty feet long with a twenty-foot face.

**Capital.**—300x1500 feet; situated on the north slope of Bear Mountain, four miles west of Silverton, Animas district; owners Frank and Andrew Robbins, both Silverton, and Ware & Co., Jerseyville, Ills.; vein a fissure three and one-half feet wide, pay streak from two to six inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead and seventy-two ounces silver per ton; developed by one shaft twenty-five feet deep and drift twenty-five feet long.

**Carbonate King.**—(See Blackstone and Carbonate King.)

**Caribou.**—300x1500 feet; situated on the east slope of Sultan Mountain, one and one-half miles south of Silverton, Animas district, and located in 1880; owners J. T. Brewer and A. L. Calhoun, both Silverton; vein a fissure six feet wide, containing quartz carrying pockets of galena, assaying forty per cent lead and forty ounces silver per ton; developments—one shaft twenty feet deep and a tunnel twenty feet long designed to cut the vein 150 feet deep.

**Cascade Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1879; capital stock $1,000,000, in 20,000 shares of $50 each, non-assessable; president, Wm. W. Ross; vice-president, Frank Robbins; secretary and treasurer, J. Orr—all Silverton; owns Little Luthy, Manhattan, Isle of Beauty, Little Maud, and Mountain View, five claims, 300x1500 feet each; situated on the east slope of Sultan Mountain, one and one-half miles south of Silverton, Animas district; located in 1876; veins all fissures, from four to five feet wide, pay streaks in the first four, twelve, three, twelve, and nine inches wide, respectively, containing galena and gray copper, the ore in the first assaying sixty ounces silver, in the second 250 ounces, and in the third seventy-five ounces per ton; developed by one cross-cut 350 feet long, designed to cut all the veins, and five open cuts with ten-foot-faces, one on each claim.

**Cashier Group.**—Four claims, 300x1500 feet each, viz., Cashier, Maria, Wheel of Fortune, and Iron Duke; situated on Cascade Creek, thirteen miles south-west of Silverton, Animas district; located in August, 1880;

owners W. O'Connell, Frank Harmon, and H. Brown, all Durango, H. W. McLaughlin, J. E. Hubbard, J. Beebe, and L. O. Wood, all Ellis, Kas., and J. L. Haines, Ophir; veins all fissures, four feet wide each, pay streaks from five to twenty inches, containing galena, gray copper, and brittle silver, assaying from thirty to seventy-five ounces silver per ton, in a quartz gangue; developed by two tunnels seventy-five and twenty-five feet long and two open cuts with fifteen-foot faces each.

**Caucasus Group.**—Seven claims; situated in Ross Basin, near the head of Cement Creek, nine and one-half miles north of Silverton, Eureka district; patented in 1880; owners J. B. Ross, Silverton, Philip Brinneman, Pottsville, Pa., and Hugh Ross, —— Tenn.; veins all fissures, as follows: in the Caucasus, M. E. Harrison, Emma, and Park (four adjoining claims on the same vein), from ten to forty feet wide, with two pay streaks, one on the hanging-wall from two to five feet, containing galena, zinc blende, iron and copper pyrites, and carbonates, in a quartz gangue, milling, when sorted, twenty per cent lead and fifteen ounces silver per ton, and one on the foot-wall from one to five feet wide, gray copper associated with a little galena, zinc, and pyrites, in quartz, milling, when sorted, fifty ounces silver per ton; in the Ross eight feet wide, pay streak twenty inches, containing galena in a quartz gangue, assaying five per cent lead and twenty ounces silver per ton, in a quartz gangue; in the Winchester five feet wide, pay streak varying in width and containing iron and copper pyrites and gray copper, assaying thirty ounces silver per ton, in a quartz gangue; in the N. G. ten feet wide, with two pay streaks aggregating ten inches, containing galena in a quartz gangue, assaying fifteen ounces silver per ton; developments—$700 worth of work on each claim, and 300x1500 feet each, except Emma 1200x300.

**Centennial.**—300x1500 feet; situated on east slope of Eureka Mountain, one-fourth mile north-west of Eureka, Eureka district; located in 1876; owned by B. F. Ferguson and H. F. LeRoy, both Eureka; vein a fissure, six feet wide, pay streak sixteen inches, containing iron pyrites and some gray copper in a quartz gangue, milling, when sorted, forty-seven ounces silver per ton; developments—a forty-five-foot tunnel and a fifteen-foot shaft, both on the vein.

**Chandler and Eight to Seven.**—Two claims, 300x1500 feet each; situated on the west slope of Missouri Mountain, ten miles north-east of Silverton, Eureka district; located in July, 1873, and August, 1878, respectively; owners H. G. Carson, Ouray, and G. S. Parmelee, Leadville; veins both fissures, four feet wide each, containing gold and silver in a quartz gangue, milling about the same as the Surprise ore; developments—one cross-cut fifty-six feet long and two shafts sixty and twenty feet deep on the former, and one drift thirty feet long on the latter.

**Charity Ann Group.**—Six claims, 300x1500 feet each; situated on the south-east slope of Tower Mountain, seven miles north-east of Silverton, Eureka district; owner Dr. J. S. Lawrence, Silverton; veins all fissures, as follows: in the Charity Ann five feet wide, pay streak sixteen to twenty-four inches, containing galena and copper pyrites, assaying fifty per cent lead and fifty ounces silver per ton, in a quartz gangue; developed by a thirty-five-foot shaft; in the Cleopatra five feet wide, containing quartz, with galena, gray copper, and bismuth silver, milling sometimes as high as fifty ounces silver per ton; developed by one tunnel seventy feet long; and in the other claims, Gen. Stanley, Buckeye, Extension of Cleopatra, and Lady Bentley, there is more or less development work, and all showing fairly.

**Chas. Sumner.**—(See Boston and Chas. Sumner.)



**Chicago Enterprise Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1878; capital stock $3,000,000, in 120,000 shares of $25 each, non-assessable; president, F. A. Griswold; first vice-president, N. N. Hurst—both Chicago; second vice-president, Chas. H. Lawrence, New Orleans; secretary, Edward S. Hunt; treasurer, Oliver S. Perry—both Chicago; agent, J. R. Hunt, Animas Forks; offices 110 Dearborn street, Chicago, and Animas Forks; owns four claims, 300x1500 feet each, viz.: White, Emma N., and Little Bessie; situated in Horseshoe Basin and on the north-west slope of Wood Mountain, one and one-fourth miles north-east of Animas Forks, Eureka district; veins all fissures; in the White 100 feet wide (or perhaps a number of veins), with five pay streaks dipping together on going downward, the principal of which is sixteen inches, containing free-milling quartz, assaying from one-fourth to ten ounces gold and from 25 to 200 ounces silver per ton, and carrying both native silver and free gold in pockets; developed by two tunnels on the vein, one on foot-wall seventy feet long, from end of which is a 115-foot shaft, and two on hanging-wall twenty feet long, showing mineral across the entire breast, and one cross-cut 200 feet long, cutting the vein with its five pay streaks at a depth of seventy-five feet; in the Emma N. eight feet wide, pay streak thirty inches, six inches of which is gray copper with native and brittle silver in quartz, assaying 100 ounces silver per ton, and the other twenty-four inches galena in a quartz gangue, assaying twenty ounces silver per ton; developments—one twenty-foot shaft; in the Little Bessie nine feet wide, containing mineralized quartz; developed by one tunnel on the vein twenty feet long; and Path-finder, situated on the north-west slope of Cinnamon Mountain, three-fourths mile south-east of Animas Forks; containing a large body of low-grade galena, and on which assessment work has been done.

**Cincinnati and Copper Queen.**—Two parallel claims, 300x1500 feet each; situated on the west slope of Red Mountain, six and one-half miles north-west of Silverton, Red Mountain district; located in September, 1882, and February, 1883, respectively; owners M. I. Barker, Cincinnati, and J. B. Rowland, Silverton; ore body probably a deposit, two shafts thirty-five and ten feet deep, one on each claim, respectively, showing arsenical copper similar to the Congress-mine ore.

**Clara.**—(See Consolidated Mineral Point Silver Mining Company.)

**Cleopatra.**—(See Charity Ann Group.)

**Cleveland Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, J. C. McCollum, Philadelphia; general manager, T. C. Wilson, Clarion, Pa.; offices 322 Chestnut street, Philadelphia, and at Silverton; owns the Cleveland Group, five claims, 300x1500 feet each; situated on the south-east slope of Sultan Mountain, three miles south of Silverton, Animas district; veins all fissures, as follows: in the Cleveland (located in 1878, and patented in 1882) six feet wide, pay streak five inches, containing gray copper and galena in a quartz gangue, the first-class ore milling, when sorted, 984 ounces silver, the second-class 520 ounces, and the third-class 315 ounces per ton; in the Little Bertha (located in 1876, and patented in 1882) ten feet wide, pay streak from one to three feet, containing galena and gray copper in an easily-worked lime gangue, milling, when sorted, fifty ounces silver per ton; developed by one tunnel, cutting Little Bertha vein at a depth of 100 feet, on which there is 100 feet of drifting, and the Cleveland at a depth of 120 feet, on which there is 140 feet of drifting, and on the latter another drift eighty feet long; in the Egipsey (extension of Little Bertha) six feet wide, pay streak from one to three feet, containing galena and gray copper in a lime gangue, milling, when sorted, forty ounces silver per ton; developed

by two open cuts, with ten and fifteen foot faces; in the Cumberland (extension of Egipsey, located in 1879, and patented in 1882) six feet wide, containing from ten to thirty inches of galena and gray copper in a lime gangue; developed by one eighteen-foot-face cut; in the Alabama (located in 1880, and patented in 1882) three feet wide, pay streak eighteen inches, containing galena and gray copper disseminated through the lime, milling, when sorted, forty ounces silver per ton; developed by one ten-foot-face cut; and the Kingsly, a new location, with two mill sites adjoining; additional developments — another tunnel 500 feet long, designed to cut all the above veins; with considerable improvements; output sixty tons.

**Collins.**—(See J. W. Collins.)

**Colorado Mining and Land Company (The.)**—Incorporated under the laws of New York, in March, 1875; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; manager, T. H. Kane; offices Buffalo and Mineral Point; owns six claims, 300x1500 feet each, viz.: McIntyre, patented; situated on Houghton Mountain, one mile from Mineral Point, Uncompahgre district; Lake Park, Buell, and three other locations in the same vicinity, on all of which applications for patent have been made; veins all fissures, varying in width from three to five feet, containing galena and gray copper in a quartz gangue, assaying from $100 to $300 per ton in silver and gold. It is the intention of the Company to make large developments on some of these claims during the present year, and for that purpose have the necessary machinery on the ground.

**Colorado Mining, Smelting, and Investment Company (The).**—Incorporated under the laws of Colorado, in May, 1880; capital stock $5,000,000, in 50,000 shares of $100 each, non-assessable; president, Charles Atkins, Council Bluffs; secretary, William Egbert, Red Mountain City; treasurer, H. McCall, Chicago; superintendent, Fred Smith, Animas Forks; office Commercial Building, Chicago; owns three claims, 300x1500 feet each, viz.: Washington, situated on the west slope of California Mountain, two and one-half miles north-west of Animas Forks, Eureka district; vein a fissure eight feet wide, containing four feet of mineralized quartz, assaying twenty-five ounces silver per ton; developments—one twenty-foot shaft; Philadelphia, situated at the head of west fork of Animas River, two and one-half miles north-west of Animas Forks, Eureka district; vein a fissure six feet wide, containing decomposed porphyry carrying silver, assaying thirty ounces silver per ton; developed by a 115-foot tunnel; and Summit (extension of Philadelphia); vein six feet wide, containing decomposed porphyry carrying silver; developments—one twenty-foot-face open cut.

**Columbia and Sadie.**—Two claims, 300x1500 feet each; situated on the north slope of Lookout Mountain, and at the head of Mill Gulch, three-fourths mile west of Chattanooga, Red Mountain district, and located in June, 1881; owners Frank W. Ingersoll, J. W. Heck, and J. H. Alderson, all Silverton; veins both fissures two feet wide each, pay streak in the first twenty inches, containing galena, assaying forty ounces silver per ton, in a decomposed gangue; and in the last three inches wide, containing galena and copper chlorides, assaying 250 ounces silver per ton, in a quartz gangue; developments—one open cut with a twenty-foot face and two shafts ten feet deep each.

**Columbus Mining Company (The).**—C. Allison, manager; owns the Columbus, 1500x300 feet; situated on the east slope of Houghton Mountain, close to the east fork of the Animas River, and near Animas Forks, Eureka district; vein a well defined fissure over twenty feet wide at the outcrop, dipping seventy-five degrees, the mineral-bearing portion of which is pretty well streaked through a space of eight feet, the ore being galena, iron



and copper pyrites, with some zinc and other minerals on the foot-wall, there being between the walls an abundant gangue; assays fifty per cent lead and forty ounces silver per ton; developments—one level 100 feet long and one thirty-foot shaft.

**Comstock & Co.'s Sampling and Concentrating Works.**—Situated on Mineral Creek, one-half mile west of Silverton; containing a Foster Crusher, Cornish Rolls, elevator and screens, sample-grinder, two sets of Rogers' Jigs, and slime-table, etc.; motive power supplied by water; capacity ten tons per day.

**Condor.**—300x1500 feet; situated in Poughkeepsie Gulch, ten miles south of Ouray, Uncompahgre district, and located in October, 1878; owners C. J. Black, Winfield, Kansas, and E. McBride, Ouray; vein a fissure three feet wide, pay streak eight inches, containing iron pyrites, galena, and gray copper, assaying fifty ounces silver per ton, in a quartz gangue; developed by one thirty-foot shaft and one twenty-five-foot open cut and tunnel.

**Condor.**—300x1500 feet; situated on the west slope of Seigel Mountain, two and one-half miles north of Animas Forks, Eureka district, and located in June, 1876; owner Chris. Johnson, Animas Forks; vein a fissure three and one-half feet wide, containing galena, iron and copper pyrites, and gray copper, with some brittle silver, in a quartz gangue, milling, when sorted, $40 per ton; developments—one open cut and tunnel twenty-five feet long, eight feet of which is under cover.

**Coney.**—300x1500 feet; situated on the south side of Niagara Gulch, at Eureka, Eureka district, and located in 1879; owners Theo. B. Comstock, Silverton, and Fred. J. Candee, Eureka; vein a fissure six feet wide, pay streak twenty-four inches, containing galena and copper salts, assaying thirty per cent lead, ten per cent copper, and thirty ounces silver per ton, in a quartz gangue; developed by an open cut and drift forty-five feet long, fifteen feet of which is under cover.

**Confidence.**—300x1500 feet; situated on the south slope of Bonita Mountain, eight and one-half miles north of Silverton, Eureka district, and located in June, 1880; owners E. Bielefeldt, Jno. M. Gundry, Jno. R. Perry, and John and Wm. Thomas, all Silverton; vein a fissure, from three to four feet wide, pay streak twelve inches, containing bismuth silver in a quartz gangue, milling, when sorted, from 90 to 100 ounces silver per ton; developed by two open cuts, with fifteen and ten foot faces, and one ten-foot drift.

**Congress Copper Mining Company (The).**—Incorporated under the laws of New York, December 26, 1882; capital stock $600,000, in 600,000 shares of $1.00 each, non-assessable; president, J. F. Pratt, Southington, Conn.; secretary and treasurer, Geo. H. Foltz, Hartford, Conn.; assistant secretary, Wm. R. Walkley, Brooklyn; general manager, O. P. Posey, Silverton; office Tribune Building, New York City, and Silverton; owns the Congress mine, 300x1500 feet; situated on the west slope of Red Mountain, one mile south of Red Mountain Town, Red Mountain district, and located in August, 1881; ore body is a deposit, a shaft eighty feet deep showing arsenical copper in a quartz gangue, all the way on all sides, milling, when sorted, twenty-eight per cent copper, one ounce gold, and fifteen ounces silver per ton, and one tunnel 210 feet long, cutting the bottom of the shaft, and showing mineral the same as before for the last fifteen feet, making this one of the largest ore bodies yet discovered in the San Juan country.

**Consolidated Mineral Point Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock

$2,500,000, in 250,000 shares of $10 each, non-assessable; president, Nathan E. Seeley; vice-president, G. Livingston Morse; secretary, Sidney E. Morse; treasurer, Robert White; office Room 70 Morse Building, 140 Nassau street, New York City; owns four claims, 300x1500 feet each, viz.: Clara, Georgia, Big Giant, and Central; situated on Mineral Point Mountain, near Mineral Point, and ten miles from Ouray, Uncompahgre district, and all in process of patent; veins all fissures, from ten to twenty feet wide, pay streaks about the same size and containing mineral of a similar character to that in the Waldron Consolidated Silver Mining Company's property; developments—twenty feet of work on each claim, and the Silver Peak Mining Company's tunnel will cut these four veins from 800 to 1,000 feet in depth.

**Constantine.**—(See Washington and Constatine.

**Contra Costa Mining Company (The).**—Incorporated under the laws of Maine, in October, 1882; capital stock $50,000, in 50,000 shares of $1.00 each, non-assessable; president, A. W. Packard, Brockton, Mass.; secretary, Geo. F. Gould, Portland, Maine; treasurer, W. F. Mitchell, Brockton, Mass.; office 85 Exchange street, Portland, Maine; owns the Contra Costa lode, 300x1440 feet; situated on the north-east slope of Kendall Mountain, one mile from Silverton, Animas district, and located in 1880; vein a fissure, six feet wide, with two pay streaks from three to four inches wide each, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and from thirty to thirty-five ounces silver per ton; developed by three open cuts, with faces from ten to twenty-five feet, and one tunnel 100 feet long, designed to out the vein 150 feet deep.

**Copper Queen.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile north-east of Chattanooga, Red Mountain district, and located in 1883; owners Wm. H. Evick and A. Guerin, both Chattanooga; orebody probably a deposit, a ten-foot-face cut, with a ten-foot tunnel from end of cut, showing galena and copper scattered through the quartz.

**Cornell.**—300x1500 feet; situated on the north slope of California Mountain, one and a half miles north-west of Animas Forks, Eureka district, and patented in 1882; owners C. H. Bent, Lake City, and H. J. Hall, Chicago; vein a fissure twenty feet wide, containing quartz, galena, iron pyrites, gray copper, and sulphurets, assaying from 9 to 420 ounces silver per ton; developed by a forty-foot tunnel.

**Crescent.**—300x1500 feet; situated on the south-west slope of Little Giant Mountain, four miles north-east of Silverton, Animas district; located in September, 1882; owner Robert A. Ambold, Silverton; vein a fissure five feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, seventy per cent lead and twenty ounces silver per ton; adjoining which is twenty-four inches of gold-bearing quartz; developments—one twenty-foot-face cut.

**Crispen.**—300x1500 feet; situated on the east slope of Crown Mountain, one-half mile north of Eureka, Eureka district; located June, 1873; owners Richard J. Corley, Red Mountain Town, John P. Johnson, Eureka, and Dr. J. P. Wallace, Animas City; vein a fissure fifteen feet wide, pay streak five feet, containing galena and copper and iron pyrites in a quartz gangue, milling, when sorted, sixty-five ounces silver per ton; developed by a fifty-foot drift and a twelve-foot shaft; output five tons.

**Crown Point.**—300x1500 feet; situated on the west slope of Sultan Mountain, one and a half miles west of south from Silverton, Animas district; located in January, 1881; owners John F. Williams, John R. Perry, Eunice Annear, and William Williams, all Silverton; vein a fissure four feet wide, pay streak ten inches, containing galena and gray copper in a quartz gangue, milling, when sorted, five per cent copper, five per cent lead, forty-five ounces silver, and one-half ounce gold per ton; developed by two drifts 130 and 220 feet long, respectively.



**Crown Point.**—300x1500 feet; situated on the north side of Mill Creek, six miles north-west of Silverton, Red Mountain district; located in August, 1880; owners J. C. Bates and E. D. Silsby, both Ophir, and Taylor McGrew, Silver Cliff; vein a fissure eight feet wide, pay streak six inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and thirty-five ounces silver; developed by a tunnel fifteen feet long and two open cuts, with ten-foot faces each.

**Crown Point.**—300x1500 feet; situated at head of Arastra Gulch, four miles north-east of Silverton, Animas district; located in 1874; owners Theo. B. Comstock, Silverton, J. W. Jameson, Del Norte, and N. D. Waite, Jersey City, N. J.; vein a fissure five feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, twenty-five per cent lead, thirty ounces silver, and some gold per ton; developed by three cuts with fifteen-foot faces each.

**Crown Point Group.**—Four claims, 300x1500 feet each, viz.: Crown Point, New York, Gypsy, and Red Cloud; situated at the head of Limestone Creek, twelve miles south-west of Silverton, Animas district; located in July, 1882; owners H. O. Willis, Rico, J. C. McManus and W. O'Connell, both Durango; veins all fissures, from twenty to forty inches wide, pay streaks from four to nine inches, except in the Crown Point, eighteen inches wide, containing galena and gray copper, assaying fifty-five ounces silver per ton, in a quartz gangue; developments—two shafts six and sixteen feet deep and two open cuts with ten-foot faces each.

**Crown Mountain Mining and Milling Company.**—(Of Cincinnati, Ohio); owns a reduction-works, situated at Eureka, containing complete and improved machinery for the treatment of ores, and the old Emma Dean property, now known as the Roving Ranger, on which they contemplate doing considerable work.

**Crown Prince.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district, and located in March, 1882; owners W. F. Mayfield, Elmer King, A. L. Calhoun, and J. W. Sites, all Silverton; vein a fissure, four feet wide, pay streak twenty-four inches, containing a black copper ore, assaying twenty per cent copper and 300 ounces silver per ton, in a quartz gangue; developments—one drift twenty feet long.

**Crystal and Croghan.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Boulder Gulch, two and one-half miles north of Silverton, Animas district, and located in June, 1874; owners J. W. Collins, J. H. Reed, and Michael O'Neil, all Silverton, and M. D. Rapp and Louis Gathmann, both Chicago; vein a fissure ten feet wide, containing quartz carrying both gold and silver; developed by two drifts sixty feet long, one on each claim.

**Dagenfeldts and U. S. Treasury Extension.**—Two claims 300x1500 feet each; situated on the south slope of Green Mountain, seven miles north-west of Silverton, Animas district, and located in 1877, and patented in 1882; owners E. Bielefeldt and Peter Meyer, both Silverton, Phillip Zang, Denver, and Chas. C. Priester, Davenport, Ia.; veins both fissures, in the former eighteen inches wide, all pay, and in the latter from twelve to fifteen

feet wide, pay streak thirty inches, containing galena in a quartz gangue, milling, when sorted, from forty to sixty per cent lead and sixty-five ounces silver per ton; developed by a tunnel 175 feet long, cutting the vein at a depth of 200 feet and a drift twenty feet long; output ten tons.

**Daisy.**—300x1500 feet; situated on the top of Tower Mountain, two miles north-west of Howardsville, Animas district, and located in August, 1881; owners J. H. Soward and Doyle Bros., all Howardsville; vein a fissure five feet wide, pay streak twelve inches, containing galena and yellow copper, assaying thirty per cent lead, twenty ounces silver, and $5 in gold per ton, in a quartz gangue; developments—one fifteen-foot cut.

**Dakota.**—(See Iron City Silver Mining Company.)

**Daniel Webster and Henry Clay.**—Two parallel claims, 300x1500 feet each; situated in Dry Gulch, seven miles north of Silverton, Red Mountain district, and located in March, 1883; owned by Bernard Mallon, Lake City, James Dugan and Wm. Sullivan, both Silverton; ore bodies probably deposits, a twelve-foot-face open cut on each claim showing galena and arsenical copper in decomposed porphyry on all sides.

**Dayton.**—300x1500 feet; situated on the west slope of Engineer Mountain, nine miles south-east of Ouray, Uncompahgre district, and located in 1881; owners C. W. and R. W. Hsakins, both Ouray; vein a fissure four feet wide, pay streak fourteen inches, containing galena and sulphurets in a quartz gangue; developed by an eighteen-foot shaft and an eleven-foot tunnel.

**Dayton.**—(North extension of Cleveland); 300x1500 feet; situated on the south-east slope of Sultan Mountain, three miles south of Silverton, Animas district; located in 1878, and patented in 1880; owners Frank and Andrew Robbins, E. W. Hodges, and S. E. Herr, all Silverton, and R. C. Luesley, Colorado Springs; vein a fissure six feet wide, pay streak four inches, containing gray copper in a quartz gangue, milling, when sorted, 300 ounces silver per ton; developed by one shaft ten feet deep, one tunnel sixty-five feet long, and one open cut forty feet long with a twenty-foot face; output fifteen tons.

**Decalogue.**—300x1500 feet; situated on South Lookout Mountain, eight miles north of west from Silverton, Red Mountain district, and located in June, 1881; owners R. H. Hoffman and James Burrows, both Silverton, and Oney Carstaphen, Silver Cliff; vein a fissure four feet wide, pay streak eight inches, containing quartz, galena, and some gray copper, assaying twenty per cent lead and forty ounces silver per ton; developed by one shaft twenty feet deep and one tunnel 160 feet long, designed to cut the vein 250 feet deep.

**Democrat.**—300x1500 feet; situated on the south slope of Sultan Mountain, five miles south of Silverton, Animas district, and located in July, 1876; owner J. H. P. Voorhies, Silverton; vein a fissure four feet wide, pay streak from five to six inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and forty-five ounces silver per ton; developed by one open cut with a twenty-five-foot face and one open cut and tunnel thirty feet long, twenty-five feet of which are under cover.

**Diamond L.**—Owned by W. J. Forsyth and Albert Bernard, both Howardsville; claim 300x1500 feet; situated on the south slope of King Solomon Mountain, two miles south of Howardsville, Animas district; located in 1874, and patented in 1882; vein a fissure at least six feet wide, with two pay streaks, one on each wall, twenty inches wide each, containing galena and copper pyrites, assaying forty per cent lead and 100 ounces silver per ton, in a quartz gangue; developed by one tunnel on the vein fifty feet long.



**Diamond Tunnel Site.**—3000x6 feet; situated on the east slope of Sultan Mountain, one and one-fourth miles south of Silverton, Animas district, and located in 1877; owner Paul D. Wallis, Boston; on which a tunnel is driven 400 feet long, cutting the Diamond Tunnel lodes, No. 1 and No. 2, the last a fissure vein two feet wide, pay streak from two to three inches, containing galena and gray copper in a quartz gangue, milling, when sorted, thirty per cent lead and forty ounces silver per ton, and designed to cut four other known lodes in the direct course of the tunnel, viz., Hawkeye, Emblem, Seal, and Cocktail, the first of which it will cut about 700 feet from the surface.

**Dives.**—300x1500 feet; situated on the north slope of Sultan Mountain, one and one-half miles south-west of Silverton, Animas district, and located in February, 1876; owners Emile Charest, Ouray, and Oliver Desentels, Silverton; vein a fissure five feet wide, pay streak fourteen inches, containing gray copper and galena, assaying from 100 to 150 ounces silver per ton, in a quartz gangue; developed by one cross-cut forty-five feet long, a drift from end of cross-cut forty-five feet long, a shaft from end of drift forty feet deep, and one tunnel seventy feet long.

**Dives.**—300x1500 feet; situated on the east slope of King Solomon Mountain, four miles east of Silverton, Animas district; located in 1874, and patented in 1881; owners A. W. Hudson and G. U. Ingersoll, both Silverton; vein a fissure from three to five feet wide, pay streak from two to ten inches, and averaging three, containing galena and gray copper, assaying sixteen per cent lead and fifty-five ounces silver per ton, in a quartz gangue; developed by two open cuts with fifteen-foot faces each.

**Druid and Druid No. 2.**—Two claims, 300x1500 feet each; situated in Bear Gulch, two miles west of Silverton, Animas district, and located in 1881; owners Wm. Smithern and Wm. S. Thomas, both Silverton; vein a fissure four feet wide, pay streak four inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead and forty-nine ounces silver per ton; developed by three drifts, seventy, thirty, and thirty-five feet long.

**Dunderberg.**—(See Bobtail, Dunderberg, etc.)

**Durango.**—300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile east of Red Mountain City, Red Mountain district; located in February, 1883; owners G. P. Livingston, Arthur Ames, and W. B. West, all Red Mountain City, and W. H. Emerson, Chattanooga; vein probably a fissure, four feet wide, containing quartz, galena, and arsenical copper, assaying ten per cent copper and sixty-five ounces silver per ton; developments—one twelve-foot shaft.

**Durango Group.**—Five claims, 300x1500 feet each; situated on the north side of Mill Gulch, one and one-fourth miles west of Chattanooga, Red Mountain district; located in March, 1883; owners C. P. Mallett, Geo. B. Hall, Jno. M. Hall, and Jno. Larsh, all Chattanooga; Silver Coin vein a contact, eighteen feet wide, pay streak thirty inches, containing galena and arsenical copper, assaying fifteen per cent copper and ninety ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut; Bullion vein a fissure, eight feet wide, pay streak sixteen inches, containing galena and arsenical copper, assaying ten per cent copper, twenty-five per cent lead, and twenty-five ounces silver per ton, in a quartz gangue; developments—one ten-foot-face cut; Bullion King vein a fissure, four feet wide, pay streak ten inches, containing gold and silver bearing quartz; developments—one ten-foot-face cut; Little Mattie vein a fissure, four feet wide, containing quartz and arsenical copper; developed by one fifteen-foot tunnel; Bonanza vein a fissure,

four feet wide, containing quartz and galena, assaying fifty per cent lead and fifty ounces silver per ton; developed by one thirty-foot tunnel; all these veins carry some gold.

**Durham and Tanner Boy.**—Two claims, 300x1500 feet each; situated on the divide between Mineral and Red Mountain Creeks, near Red Mountain City; located in December, 1882; owners Stephen Allison, Anson H. Bridgman, and Robert Hanna, all Silverton; ore body probably a deposit, two open cuts, one on each lode with fourteen-foot faces each, both showing galena and arsenical copper in the quartz.

**E Pluribus.**—(See Grand Mogul and E Pluribus.)

**E. T. Sweet Sampling-works.**—Situated at Silverton; containing two Crushers, two sets Cornish Rolls, with elevators, screens, and sampling machinery; motive power supplied by steam in winter and water in summer; capacity fifty tons per day (twenty-four hours).

**Eastern Star Group.**—Six claims, 300x1500 feet each; situated on the north end of Boulder Mountain, nine miles north of Silverton, Eureka district; located in July, 1879; veins all fissures, as follows: Eastern Star six feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and forty ounces silver per ton; developed by one thirty-five-foot shaft; Tennessee five feet wide, pay streak three inches, containing quartz and galena, assaying thirty-five per cent lead and thirty-two ounces silver per ton; developed by one tunnel thirty feet long; Mayflower four feet wide, containing mineralized quartz; developed by one shaft thirty feet deep; Highland Chief six feet wide of quartz carrying granules of mineral, assaying eleven ounces silver per ton; developed by two shafts ten and twenty feet deep; May Belle five feet wide of decomposed matter, assaying twenty per cent lead and twenty-five ounces silver per ton; developed by one thirty-two-foot shaft; and Dark Horse; owners J. B. Rowland and Jno. G. Heid, both Silverton, and F. B. Cutler and E. A. Innes, both St. John, Mich.

**Eclipse Mining and Smelting Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $600,000, in 6,000 shares of $100 each, non-assessable; president, C. C. Thompson; vice-president, Lewis P. Merrill; secretary, S. H. Dyer; treasurer, James H. Fairchild—all Chicago; office Tribune Building, Chicago, and Animas Forks; owns four claims, 300x1500 feet each, viz.: Eclipse (extension of Mountain Queen), situated on the west fork of Animas River, three miles south-west of Animas Forks, Eureka district; located in 1881; vein a fissure 100 feet wide, pay streak four feet, containing quartz and galena, assaying at the surface fifteen ounces silver per ton, and improving with depth; developments—three openings on the vein from ten to twenty-five feet; Red Cross and Black Cross, two adjoining claims on the same vein, situated on the south slope of Mineral Mountain, three-fourths mile north-west of Animas Forks, Eureka district; located in 1881; vein a fissure, with a pay streak of twenty-four inches, containing quartz, galena, and zinc, assaying thirty ounces silver per ton; and Olive Branch, situated on the east side of Treasure Mountain, one-half mile south of Animas Forks; located in 1881; vein a fissure six feet wide, containing quartz and galena; developed by an open cut with a twelve-foot face and a twenty-foot tunnel from end of cut; and Oriental, Ironsides, Iron Cap, and Great Republic, situated near Animas Forks; on which assessment work has been done; and the Eclipse and Olive Branch Mill sites, five acres each, the former one mile south of Animas Forks, on which a smelter, containing complete and improved machinery for treating ores, is erected; capacity twenty-five tons per day.



**Edith and Hamlet.**—Two adjoining claims on the same vein, 300x1500 feet; situated on the north slope of Galena Mountain, two and one-half miles south of Eureka, Eureka district; located in June, 1882; owners W. G. White, C. Schwartz, and D. H. Flisher, all Eureka; vein a fissure three feet wide, pay streak twenty inches, containing heavy galena, yellow copper, and quartz, assaying fifty per cent lead, twelve ounces copper, and thirty-seven ounces silver per ton; developments—six openings on the vein, ten feet deep each, all showing mineral.

**Eight to Seven.**—(See Chandler and Eight to Seven.)

**El Paso.**—(See Walla Walla, El Paso, etc.)

**Eliza.**—300x1500 feet; situated on the east slope of Red Mountain, one-fourth mile north-west of Gladstone, Red Mountain district; located in 1870; owner W. A. Walter, Lawrence, Kas.; vein a fissure five feet wide, pay streak from eight to eighteen inches, and averaging twelve inches, containing galena, assaying forty-seven per cent lead and sixty ounces silver per ton, in a quartz gangue; developed by one tunnel seventy feet long, cutting the vein fifty feet deep, and one tunnel 160 feet long, designed to cut the vein 150 feet deep, with some other workings.

**Eloise.**—300x1500 feet; situated in Mill Gulch, six and one-half miles north-west of Silverton, Red Mountain district, and located in March, 1881; owner F. A. Thing, Silverton; vein a fissure six feet wide, pay streak ten inches of galena and iron pyrites in a quartz gangue; developments—one ten-foot-face cut.

**Emerald.**—300x1500 feet; situated on the east slope of Anvil Mountain, one-fourth mile west of Silverton, Animas district; located in 1876, and patented in 1882; owners James Robin and N. E. Slaymaker, both Silverton; vein a fissure three and one-half feet wide, pay streak from one to ten inches, and probably averaging four inches, containing galena, gray copper, and oxide of iron, in a quartz gangue, milling, when sorted, twenty per cent lead and sixty ounces silver per ton; developed by one cross-cut tunnel ninety feet long, two drifts from end of tunnel seventy-eight and eighteen feet long, respectively, and one twenty-two-foot shaft; output twenty tons, and it is estimated that there are 150 tons in sight between the drifting and the surface, the vein widening with depth.

**Emma.**—300x1500 feet; situated on the south fork of Mineral Creek, nine miles west of Silverton, Animas district, and located in 1882; owners Jas. E. O'Brien and Michael Murtogh, both Rico; vein a fissure three feet wide, pay streak from five to ten inches, containing quartz, galena, and sulphurets, assaying from twenty-five to seventy-five ounces silver per ton; developments—one twelve-foot shaft.

**Emperor.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile east of Chattanooga, Red Mountain district, and located in June, 1881; owners W. C. Roberts, Geo. Hemphill, Frank T. Rodd, W. W. Bullock, and Louis Blanchard, all Silverton; vein a fissure five feet wide, pay streak twelve inches, containing galena and copper, assaying twenty-five per cent lead and thirty-five ounces silver per ton, in a quartz gangue; developments—one fourteen-foot-face cut and a twenty-foot tunnel from end of cut.

**Empire No. 2.**—300x1500 feet; situated on the south-east slope of Sultan Mountain, one mile south of Silverton, Animas district; owners B. G. Puckett and John G. Heid, both Silverton; vein a fissure from four to five feet

wide, containing quartz and galena, assaying from twenty-five to thirty per cent lead and from twenty to twenty-five ounces silver per ton; developments—one fifteen-foot-face cut and a twenty-foot drift from end of cut.

**Engineer.**—300x1500 feet; situated in the East Cascade Basin, thirteen miles south-west of Silverton, Animas district, and located in July, 1882; owners Beverley R. Keim and Chas. J. Uban, both Rico; vein a fissure fifty inches wide, pay streak twenty-four inches, containing gray copper, assaying 100 ounces silver per ton, in a quartz gangue; developed by one shaft thirty-five feet deep.

**Engineer.**—300x1500 feet; situated on the west slope of Brown Mountain, five miles west of Animas Forks, Eureka district, and located in 1881; owners C. E. Dow and M. Feeney, both Durango; vein a fissure, four feet wide, pay streak from three to four inches, containing gray and yellow copper, assaying from $150 to $200 per ton, in a quartz gangue; developed by one twenty-five-foot tunnel.

**Engineer Group.**—Five claims, 300x1500 feet each; situated on the top of Engineer Mountain, three and one-half miles north of Animas Forks, Eureka and Galena districts, and located in May, 1880; owners C. N. Chittenden and others, New York City; veins all fissures, in the Engineer nine feet wide, pay streak twenty-four inches, containing galena with some ruby silver in a quartz gangue, milling, when sorted, 138 ounces silver per ton; developed by a twenty-five-foot shaft; in the Silver Plume five feet wide, containing mineralized quartz; developments—a twenty-foot shaft; in the Ruby Silver four feet wide, containing mineralized quartz; developments—a twenty-foot shaft; in the Empress five feet wide, containing mineralized quartz; developments—a twenty-foot shaft, and in the O'Connor; seven feet wide, containing mineralized quartz; developments—a twenty-foot cut with a fifteen-foot face and a fifteen-foot shaft.

**Esmerelda and Black Prince.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west slope of King Solomon Mountain, four and one-half miles north-east of Silverton, Animas district, and located in 1878 and 1880, respectively; owners Jno. L. Hall, Silverton, and Thomas Merrill, Saginaw, Mich.; vein a fissure, thirty feet wide, containing gold and silver bearing quartz, milling, when sorted, one-half ounce gold and thirty ounces silver per ton; developments—on the first, one tunnel 136 feet long, cutting the vein at depth of fifty feet, on which there are twenty feet of drifting, and on the last, one twenty-foot shaft and one thirty-foot cross-cut

**Eureka Mining Company (The).**—Incorporated under the laws of Kansas, in March, 1878; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president, B. Judd; vice-president, Robert Halford; secretary, N. McAlpine; treasurer, S. P. Clark—all Wyandott, Kas.; manager and superintendent, C. F. Peters, Kansas City, Kas.; offices Wyandott and Eureka; owns three claims, 300x1500 feet each, situated on the west side of Animas River, three-fourths of a mile north-west of Eureka, Eureka district, and located in 1876, viz.: Pay-master and Little Maud, two adjoining claims on the same vein, a fissure, three and one-half feet wide, pay streak eighteen inches, containing quartz, galena, iron and copper pyrites, assaying 100 ounces silver and $16 gold per ton; developments—two shafts twenty-five feet deep each and several openings on the surface; in Pay-master a twenty-five-foot-face cut and a forty-foot drift; on Little Maud and Daisy four and a half feet wide, pay streak twenty-four inches, containing quartz, gray copper, and a little galena, assaying 100 ounces silver per ton; developments—three openings on the vein; and a five-acre mill site adjoining the lode claims.



**Excelsior.**—300x1500 feet; situated in Placer Gulch, two miles west of Animas Forks, Eureka district, and patented in May, 1883; owned by C. H. Bent, Lake City, and H. J. Hall, Chicago; vein a fissure, ten feet wide, pay streak sixteen inches, containing gray copper and sulphurets in a quartz gangue, milling, when sorted, $100 per ton; developed by a tunnel 460 feet long, designed to cut the vein 300 feet deep, and cutting four other veins, the last of which is seven feet wide, containing mineralized quartz, two assays showing two to five ounces silver and considerable gold per ton; developments—115 feet of drifting from the cross-cuts.

**Exchange.**—(South extension of Cleveland); 300x1500 feet; situated on the south-east slope of Sultan Mountain, three miles south of Silverton, Animas district, and located April, 1881; owners L. E., H. E., and Hiram Herr, all Silverton; vein a fissure, six feet wide, pay streak from four to twelve inches, containing quartz and gray copper, assaying 150 ounces silver per ton; developments—one drift twenty feet long.

**Fearless.**—(Extension of Nevada); 300x1500 feet; situated on east slope of California Mountain, one and a half miles west of Animas Forks, Eureka district; located in June, 1875; owner E. E. Gibson, Animas Forks; vein a fissure six feet wide, containing twenty-four inches of mineralized quartz, carrying galena, gray copper, and silver glance, milling, when sorted, 150 ounces silver per ton; developments—one open cut and tunnel fifty-five feet long, thirty-five feet of which is under cover.

**Feigel Group.**—Five claims, 300x1500 feet each; situated on the south side of Mill Gulch, one-half mile west of Chattanooga, Red Mountain district; owner William Feigel, Silverton; Pinto, located in May, 1881; vein a fissure two feet wide, pay streak six inches, containing galena in a quartz gangue, milling, when sorted, twenty per cent lead and ten ounces silver per ton; developments—one open cut with a ten-foot face; Margie, located September, 1880, and in process of patent; vein three feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, sixty-five per cent lead and twenty ounces silver per ton, and twenty-four inches of gouge matter, milling eighteen ounces silver per ton; developments—one open cut with a ten-foot face; Lady Helen, located in September, 1880, and in process of patent; vein two feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, thirty per cent lead and from fifteen to forty ounces silver per ton; developments—one ten-foot-face open cut; Silver King, located in September, 1880; vein thirty feet wide, containing quartz carrying both gold and silver; developments—three shafts ten feet deep each; Starter-and-Catcher, located in September, 1880; vein ten feet wide, containing gold and silver bearing quartz, assaying $84 per ton; Wm. Feigel Tunnel site, 3000x6 feet, on which a tunnel is driven twenty feet long, and designed to develop the entire property.

**Finance.**—300x1500 feet; situated on the west side of Poughkeepsie Gulch, eight miles east of south from Ouray, Uncompahgre district; located in 1879; owners Reed Bros., A. Parsell, and Martin Shultes, all Ouray; vein a fissure five feet wide, pay streak eight inches, containing pockets of bismuth, silver and antimonial silver, assaying from 50 to 250 ounces silver per ton; developed by two open cuts twelve and fifteen feet long.

**Finley Torrens.**—300x1500 feet; situated in Boulder Gulch, four miles north of Silverton, Animas district; located in 1880, and patented in 1883; owners Finley Torrens and James Gillespie, both Pittsburgh, Pa.; vein a fissure thirty-five feet wide, containing quartz, with pockets of telluride ore at irregular intervals; developed by a twenty-foot-face cut and a 200-foot cross-cut.

**Fisher Boy.**—300x1500 feet; situated on the north side of Mill Gulch, one and one-quarter miles west of Chattanooga, Red Mountain district; located in March, 1883; owners Richard Fisher, Chattanooga, and Mrs. Sargent Teasdale, Silverton; vein a fissure nine feet wide, pay streak fifteen inches, containing galena in a quartz gangue; developments—ten-foot-face cut.

**French Boys Silver Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, B. Salembier; vice-president, Arthur King; secretary, Jules Riffard; treasurer, P. Lavigne; general manager, Victor Vincent—all New York City; foreman, Theo. Ressouches, Silverton; office 38 Gold street, New York City, and at Silverton; owns seven claims, 300x1500 feet each, viz.: Mountain Queen, King Solomon, King Solomon No. 1, Jura, Mountain Quail, Big Giant, and Republic; situated on the south slope of King Solomon Mountain, four miles north-east of Silverton, Animas district; located from 1876 to 1882, and King Solomon patented in 1880, and Mountain Quail, Big Giant, and Republic in 1883; veins all fissures, respectively, as follows: five feet wide all mineral, four feet wide with a pay streak eighteen inches, three feet wide with a pay streak eight inches, from two to three feet wide with eighteen inches of mineral, thirty inches wide all pay, thirty inches wide all pay, but in the Mountain Quail there are two pay streaks from two to three feet wide each; ore—principally galena in a quartz gangue, milling, when sorted, forty per cent lead and fifty ounces silver per ton, the King Solomon containing about fifteen per cent copper and some gold; developments—one drift 100 feet long on Mountain Queen, one shaft forty feet deep, one tunnel 200 feet long and 150 feet of drifting where it cuts the vein, the latter connected with another tunnel 200 feet long by a shaft 109 feet deep and a level twenty feet long on the King Solomon, one forty-foot shaft on the Jura, two open cuts with fifteen-foot faces each on the Mountain Queen, a drift fifteen feet long and a twenty-five-foot tunnel designed to cut the vein on the Big Giant, and one twenty-five-foot-face cut on the King Solomon No. 1; output 150 tons.

**Fredreica.**—300x1500 feet; situated in Burns' Gulch, two miles north of Eureka, Eureka district; located in 1874, and patented in 1883; owners Frank R. Downing, Eureka, L. J. Brewster, and A. K. Prescott, both Rico; vein a fissure forty feet wide, pay streak twenty-two inches, containing galena, assaying fifty per cent lead and twenty-seven ounces silver per ton, in a quartz gangue; developments—a thirty-five-foot open cut and tunnel, five feet of which is under cover, and one 100-foot tunnel along the side of the vein, showing galena across the breast.

**Fuqua and Gray Copper.**—Two claims crossing each other; 1500x300 feet each; situated on the Ruby Gulch slope of North Lookout Mountain, eight miles north of west from Silverton, Red Mountain district, and located in July, 1880; owners J. H. Fuqua and Jno. A. Bard, both Silverton, and B. F. Hammett, St. Louis, Mo.; veins both fissures twenty-five and ten feet wide, respectively, pay streaks eight and ten inches wide, containing gray copper and bromide of silver in a quartz gangue, milling, when sorted, sixty-two per cent lead and sixty-five ounces silver per ton in the first, and $115 per ton in the last; developed by two open cuts with fifteen-foot faces each and one cross-cut tunnel forty-five feet long.

**Galena.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district, and located in September, 1881; owners James Murdock and John J. Deveine, both Silverton; vein a fissure four feet wide, pay streak eighteen inches, containing antimonial



galena in a quartz gangue, milling, when sorted, fifty per cent lead and 100 ounces silver per ton; developed by one twenty-foot shaft and one twenty-foot tunnel cutting vein twenty feet deep.

**Galena Queen.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district; located in September, 1882; owners H. P. Roberts, A. W. Hudson, W. F. Mayfield, Elmer King, and J. W. Sites, all Silverton, H. G. Heffron and E. M. Johnson, Beloit, Wis., W. H. Thomas, Jersey City, and A. E. Hull, Southington, Conn.; ore body probably a deposit, one shaft seventy feet deep showing galena and black copper in a porphyry gangue, on all sides, assaying forty per cent lead, ten per cent copper, and sixteen ounces silver per ton.

**Garfield.**—(See Prize Mining Company.)

**Garfield No. 2.**—(Extension of Garfield); 300x450 feet; situated in Boulder Gulch, two miles north-east of Silverton, Animas district, and located in September, 1882; owner Dr. T. P. Plantz, Silverton; vein a fissure nine feet wide, pay streak fourteen inches, containing pockets of a compound telluride ore in a quartz gangue, assaying eighteen ounces gold and 400 ounces silver per ton; developed by one ten-foot-face open cut.

**Germanic.**—300x1500 feet; situated on the east slope of Tower Mountain, one-half mile west of Howardsville, Animas district, and located in June, 1880; owners Louis Meyer and Theo. Grabowsky, both Howardsville; vein a fissure four feet wide, containing quartz, galena, and yellow copper; developed by two tunnels fourteen and nine feet long.

**Gibson.**—(See Kate Gibson.)

**Gid. R. Propper.**—300x1500 feet; situated on the west slope of Cinnamon Mountain, one mile south-east of Animas Forks, Eureka district, and located in March, 1882; owners Louis Smith and Fred. Harris, both Animas Forks; vein a fissure five feet wide, pay streak eighteen inches, containing gold-bearing quartz and iron pyrites, assaying from one to one and one-half ounces gold per ton; developed by one sixteen-foot-face open cut.

**Gladstone.**—300x1500 feet; situated on the east slope of Red Mountain, one-half mile north-west of Gladstone, Red Mountain district, and located in June, 1879; owners J. B. Rowland and Jno. G. Heid, both Silverton, and F. B. Cutler and E. A. Innes, both St. John, Mich.; vein a fissure eight feet wide, pay streak three feet, containing gold-bearing quartz, assaying from $7 to $12 gold and twenty ounces silver per ton; developed by a tunnel 150 feet long, cutting the vein at a depth of seventy feet.

**Golden Fleece.**—300x900 feet; situated on the north-east slope of Treasure Mountain, one mile south of Animas Forks, Eureka district, and located in 1878; owners Samuel Watson and Wm. Pugh, both Lake City, and Mrs. Corinna Hart, Delta; vein a fissure two feet wide, pay streak twelve inches, containing gold-bearing quartz, on which four mill-runs of sorted ore showed six, eight, ten, and eighteen and one-half ounces gold per ton; developed by one eighteen-foot-face open cut.

**Golden Fleece.**—300x1500 feet; situated at the head of Picayune Gulch, three miles west of Animas Forks, Eureka district, and located in 1879; owners Alexander & Fraser, and D. B. Fisk, all Chicago; vein a fissure four feet wide, containing gold and silver bearing quartz, milling, when sorted, $50 per ton; developed by one shaft 100 feet deep, with some other workings.

**Golden Gate.**—(Extension of Golden Fleece); 300x1500 feet; situated in Picayune Gulch, one and one-half miles west of Animas Forks, Eureka district, and located in September, 1878; owners Louis Weinberg and Louis Kafka, both Lake City, and Peter Leon, Las Vegas, N. M.; vein a fissure two and one-half feet wide, pay streak eighteen inches, containing gold-bearing quartz, milling, when sorted, from $50 to $100 per ton; developed by an open cut with a twenty-foot face.

**Goldsmith.**—300x1500 feet; situated on the west slope of Pigeon Peak, twelve miles south of Silverton, Animas district, and located in January, 1883; owners C. E. Dow and M. Feeney, both Durango; vein a fissure twelve and one-half feet wide, pay streak four feet, containing quartz carrying arsenical ruby silver, assaying $58 per ton; developed by one tunnel twenty-five feet long.

**Good Enough.**—Owned by Alanson Hall and James E. Dewey, both Middleton; claim 300x1500 feet; situated on the east slope of Tower Mountain, one and one-half miles west of Middleton, Eureka district, and located in June, 1880; vein a fissure from six to eight feet wide, pay streak twenty-four inches, containing galena and copper carbonates, assaying from ten to forty ounces silver per ton, in a quartz gangue; developments—an open cut with a twenty-foot face and a five-foot tunnel from end of cut.

**Grand Mogul and E Pluribus.**—Two claims, 300x1500 feet each, situated at the head of Cement Creek, ten miles north of Silverton, Animas district, and patented in 1881; owners F. M. Snowden and Theo. Dick, both Silverton, and Chas. Schaffer, Rose's Cabin; veins both fissures, in the former fifty feet wide, containing mineralized quartz with granules of iron and copper pyrites and some galena, assaying from twelve to seventy ounces silver per ton, and in the latter from six to seven feet wide, containing quartz, copper pyrites, and some galena, assaying from twelve to seventy ounces silver per ton; developments—one fifty-foot cross-cut on the first, and one shaft fifteen feet deep, showing seven feet of solid ore, and one forty-foot tunnel, showing two feet of mineral at surface, increasing in thickness with depth, on the last.

**Grand Trunk.**—Owned by C. C. Colby, Stanstead, P. Q., A. H. Moore, Magog, P. Q., Guy C. Nobles, St. Albans, Vt., and others; claim 300x1500 feet; situated on the west slope of Engineer Mountain, one and one-half miles from Animas Forks, Eureka district; located in 1875; vein a fissure five feet wide, pay streak from twelve to twenty-four inches, containing galena in a quartz gangue, milling, when sorted, fifty ounces silver per ton; developed by a shaft 155 feet deep, with a fifty-five-foot tunnel from bottom of shaft.

**Grand View Group.**—Six claims, 300x1500 feet each; situated on North Lookout Mountain, eight miles north of west from Silverton, Red Mountain district, and located in July, 1880; owners E. D. Silsby and J. C. Bates, both Ophir; Grand View (extension U. S. Treasury) vein twelve feet wide, pay streak thirty-six inches, containing galena in quartz, milling, when sorted, sixty-five per cent lead and forty ounces silver per ton; developed by a fifty-foot drift and twenty-foot-face cut; Yellow Jacket vein four feet wide, containing mineralized quartz, assaying fifteen ounces silver and one ounce gold per ton; developed by a ten-foot-face cut; Laura vein thirty feet, containing mineralized quartz, assaying twelve ounces silver and some gold per ton; developed by a thirty-foot tunnel; Mammoth vein thirty feet wide, containing mineralized quartz, assaying thirty ounces silver per ton; developed by a fifteen-foot-face cut; Lake Outlet, containing four inches of galena in a quartz gangue, milling, when sorted, sixty per cent lead and fifty ounces silver per ton; developed by a tunnel 120 feet long, designed to cut this and other veins; and Black Demon, containing twelve inches of galena in a quartz gangue, milling, when sorted, twenty ounces silver per ton; developed by a twelve-foot-face cut; output thirty tons.



**Granger.**—300x1500 feet; situated at the mouth of Burns' Gulch, two miles north of Eureka, Eureka district; located in 1875, and patented in 1882; owner Swan Peterson, Eureka; vein a fissure thirty feet wide, pay streak thirty-six inches, containing iron and copper pyrites and galena in a quartz gangue, milling, when sorted, twenty-two ounces silver per ton; developments—one open cut thirty-five feet long and a fifteen-foot tunnel from end of cut, both on the vein.

**Great American.**—300x1500 feet; situated on Lake Mountain, near Mineral Point, Uncompahgre district, and in process of patent; owner James L. Hill, 240 Broadway, New York; vein a fissure eight feet wide at the outcrop, pay streak from ten to thirty inches, containing quartz and galena, assaying thirty per cent lead and forty ounces silver per ton; developments consisting of several shafts and openings on the vein.

**Great Animas Gold and Silver Mining Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $6,000,000, in 600,000 shares of $10 each, non-assessable; business manager, Prof. J. H. McChesney, New York City; superintendent, J. B. Hart, Delta; office 141 Broadway, New York; owns eighteen claims, 300x1500 feet each; situated on the east slope of Treasure Mountain, one mile south of Animas Forks, Eureka district; located in 1876, 1877, and 1878; veins all fissures, as follows: in the Canola, Great Eastern Tunnel, and Cañon, adjoining claims on the same vein, from 75 to 300 feet wide of quartz carrying gold and silver, assaying from 1 to 600 ounces, and probably averaging ten ounces silver per ton; in the Enterprise ten feet wide, containing quartz, on which a tunnel 227 feet long is driven, designed to develop this and the mentioned claims, and cutting a blind lead containing six inches of iron sulphides carrying gold and silver, assaying sometimes as high as $300 per ton; Second National fifteen feet wide of mineralized quartz; Keystone six feet wide of mineralized quartz; Silver Cord thirty-five feet wide of quartz and galena, two feet of which on hanging-wall is nearly solid, and on which one mill-run of sorted ore showed thirty-two ounces silver per ton; Galena four feet wide, pay streak eight inches, containing galena, assaying thirteen ounces silver per ton; First National two feet wide of mineralized quartz—each developed by a ten-foot-face cut and the described (Enterprise) tunnel; Inter-ocean four feet wide of mineralized quartz with some galena, assaying twelve ounces silver per ton; Pride of San Juan twelve feet wide of mineralized quartz, assaying as high as fifty-four ounces silver per ton; Shamrock twelve feet wide of mineralized quartz; Independence fifteen feet wide of mineralized quartz; Bally ten feet wide of mineralized quartz; Alta six feet wide of mineralized quartz; and National Debt six feet wide of mineralized quartz—developed by one ten-foot open cut each; and some other claims on which they are doing assessment work; and the Blanchard, Nos. 1 and 2, and Watson (twenty acres each), and Hart (sixty acres) placers, adjoining the lode claims in Picayune Gulch; developed by 360 feet of ten-inch piping, 200 feet of fluming, and 600 yards of ditching; worked by one Little Giant; improvements—six buildings and a saw-mill.

**Great Republic.**—300x1500 feet; situated on the apex of Treasure Mountain, one and one-fourth miles south of Animas Forks, Eureka district; patented in 1882; owner F. B. McKenzie, Lake City; vein a fissure forty feet wide, pay streak forty-eight inches, containing galena in a quartz gangue, milling, when sorted, three per cent lead and sixty-four ounces silver per ton; developments—eight openings on the vein from four to eighteen feet deep, all showing mineral.

**Green Mountain Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $125,000, in 5,000 shares of $25 each, non-assessable; agent, F. E. Horton, Silverton, who represents the Board of Directors residing in London, Eng.; owns three adjoining claims on the same vein, 300x1500 feet each, viz.: Green Mountain No. 1, Green Mountain No. 2, and Green Mountain Extension; situated on the Cunningham Gulch, or south-west slope of Green Mountain, eight miles north-east of Silverton, Animas district; patented in 1882; vein a fissure, averaging four feet in width, pay streak from eight to forty inches, and averaging twenty-four inches, containing galena and gray copper, with some gold-bearing quartz, milling, when sorted, fifty per cent lead, forty ounces silver, and one-half ounce gold per ton; developed by four drifts, 100, 250, 300, and 325 feet long, with some other workings; output 1,000 tons.

**Gray Eagle Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, H. E. Paine; vice-president, Frank Morey; secretary, S. B. Ladd; treasurer, D. Middleton—all Washington, D. C.; manager, J. Orr, Silverton; office 412 Fifth street, Washington, D. C., and Silverton; owns the Gray Eagle, 300x1500 feet; situated on the east slope of Hazleton Mountain, three miles north-east of Silverton, Animas district; located in 1873; vein a fissure four feet wide, pay streak ten inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and fifty ounces silver per ton; developed by three levels, 200, 500, and 50 feet long, the last running from the bottom of a shaft 160 feet deep; output 200 tons.

**Guernsey.**—300x1500 feet; situated on the west slope of Red Mountain, in Mineral Gulch, one-half mile north of Chattanooga, Red Mountain district; located in April, 1881, and in process of patent; owners Dan. M. Dana, Silverton, Chas. Gast, Pueblo, and Frank W. Harwood, Boston; vein probably a fissure, and may be a deposit, cropping out on the surface twenty feet in width, and for a distance of 200 feet, one open cut, with an eighteen-foot face and eighteen feet long, showing mineral throughout, milling, when sorted, fifteen per cent copper, thirty-three per cent lead, twenty ounces silver, and $12 in gold per ton.

**Hancock.**—(See Winfield S. Hancock.)

**H. D. Nye and Bonanza King.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the west slope of Mineral Point Mountain, near Mineral Point, Uncompahgre district; patented in November, 1882; owner Eugene Parsell, Flint, Mich.; vein a fissure six feet wide at the outcrop, pay streak fifteen inches, containing gray copper and quartz, assaying sixty-five ounces silver per ton; developed by one twenty-foot shaft and one fifteen-foot drift.

**Hawkeye.**—300x1500 feet; situated on Cement Creek, one and one-half miles east of Gladstone, Animas district, and located in April, 1882; owners Jno. Murphy and G. N. Richardson, both Silverton; vein a fissure two and one-half feet wide, pay streak ten inches, containing quartz, galena, and gray copper, assaying forty per cent lead and fifty ounces silver per ton; developed by an open cut and tunnel seventy-five feet long, fifty feet of which is under cover.

**Herican.**—300x1500 feet; situated in Fairview Gulch, six miles north of Silverton, Red Mountain district; located in August, 1882, and in process of patent; owner M. I. Barker, Cincinnati; agent, Perry Ellis, Silverton; vein a fissure three feet wide, containing quartz, iron pyrites, and some galena, assaying ten ounces silver per ton; developed by an eighty-five-foot drift on the vein.



**Hidden Treasure.**—175x1500 feet; situated on the north slope of Sultan Mountain, one and one-half miles south of Silverton, Animas district, and located in May, 1881; owners Elisha Richards, Red Mountain City, and Wm. Gribble, Silverton; vein a fissure four feet wide, pay streak from four to five inches, containing quartz, galena, and gray copper, assaying ten per cent lead and sixty-five ounces silver per ton; developments—one ten-foot-face cut and one seventy-five-foot tunnel, designed to cut the vein 100 feet deep.

**Hidden Treasure.**—300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile east of Chattanooga, Red Mountain district, and located in 1880; owners Wm. J. Mulholland, Wm. Feigel, and James Evans, all Silverton; vein a fissure four feet wide; developed by a tunnel seventy-eight feet long, cutting vein seventy-five feet deep, and one shaft fifty feet deep, the mineral (galena) appearing in the shaft through an iron and copper deposit, milling one-tenth ounce gold and sixty ounces silver per ton.

**Hidden Treasure Group.**—Four claims, 300x1500 feet each; situated on the north slope of King Solomon Mountain, one-fourth mile south of Howardsville, Animas district; owners W. J. Forsyth, Albert Bernard, and T. M. Tripp, all Howardsville; veins all fissures, as follows: in the Hidden Treasure, located in 1880, three feet wide, pay streak eighteen inches, containing galena, iron pyrites, and magnetic iron, assaying ten per cent copper and thirty ounces silver per ton; developed by a ten-foot-face open cut; in the America, located in 1880, seven feet wide, pay streak thirty-six inches, containing magnetic iron, galena, and copper pyrites, assaying as high as fifty per cent lead and sixty ounces silver per ton; developed by a forty-foot tunnel on the vein; in the Rock Island, located in 1874, four feet wide, containing galena, iron and copper pyrites, and quartz, assaying as high as eighty ounces silver per ton; developed by a twenty-foot tunnel on the vein; and in the John Morse six feet wide, pay streak eighteen inches, containing galena and quartz, assaying thirty-five per cent lead and fifty ounces silver per ton; developed by a ten-foot-face cut, and in addition there is a tunnel 104 feet long, designed to cut the veins in all the above claims.

**Highland Mary Tunnel Site.**—Owner Edward Ennis, New York City; superintendent, D. W. Berger, Silverton; situated on the east slope of King Solomon Mountain, six miles east of Silverton, Animas district; located in 1875; on which a tunnel is driven about 3,200 feet long, cutting the veins in the following claims: Highland Mary, Robert Bruce, Manhattan, Parkview, Long Tom, Lookout, and Mountaineer (two last adjoining each other on the same vein), 300x1500 feet each, and all patented from 1876 to 1881; veins all fissures, from two to thirty feet in width, pay streaks from nine to ninety inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from $50 to $1,300 per ton; developed by drifts connecting with the tunnel and aggregating over 3,000 feet in length, with considerable other workings, showing large ore-reserves; the work on this mine is done with Clayton Air-drills, and it has the only steel sectional track in the San Juan country.

**Hiawatha Group.**—Five claims, 300x1500 feet each, viz., Hiawatha, No. 1, No. 2, No. 3, No. 4, and No. 5; situated on the Ohio Gulch slope of Red Mountain, three and one-half miles north-west of Silverton, Animas district; located in August, 1882; owners Geo. W. Seaman and R. W. Hardy, both Silverton; veins all fissures, averaging eight feet in width, pay streaks in the two first eight and five inches wide, respectively, and in the two last seven

inches wide each, containing galena in a quartz gangue, milling, when sorted, thirty per cent lead and forty-five ounces silver per ton; developed by three open cuts with ten-foot faces each and one tunnel forty feet long.

**Hilgard.**—300x1500 feet; situated on the west side of Poughkeepsie Gulch, eight miles east of south from Ouray, Uncompahgre district; located in 1875, and patented in 1883; owners H. W. Reed, Ouray, and B. W. Brunton, Leadville; vein a fissure, four feet wide, pay streak six inches, containing pockets of antimonial and bismuth silver, which mill, when sorted, from 100 to 500 ounces silver per ton; developed by one tunnel thirty feet long.

**Home-stake.**—300x1500 feet; situated on the west slope of Grouse Mountain, one and one-half miles south of Animas Forks, Eureka district; located in 1877; owner Wm. Sullivan, Silverton; vein a fissure, eight feet wide, pay streak from fifteen to thirty inches, containing gray and yellow copper and quartz, assaying fifty ounces silver per ton; developments—two open cuts with eighteen and thirty foot faces and tunnel from end of the first twenty-five feet long.

**Home-stake and Poverty.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the divide between Limestone and South Mineral Creeks, twelve miles south-west of Silverton, Cascade district; located in July, 1882; owned by Harrison Howe, Rico; vein a fissure, four feet wide, pay streak ten inches, containing quartz, galena, and gray copper, assaying seventy ounces silver per ton; developed by a fourteen-foot shaft.

**Honest John and Sirnack.**—Two parallel claims, 300x1500 feet each; situated in Dry Gulch, seven miles north of Silverton, Red Mountain district; located in March, 1883; owned by John and C. J. Carver, both Silverton, James Reynlods, Gus. Miller, and James Ryan, all Red Mountain Town; ore bodies probably deposits, a shaft twelve feet deep showing five feet of galena in decomposed porphyry in the Honest John, and an open cut with a ten-foot face showing three inches of the same character of mineral in the Sirnack.

**Hoosac and Broad-gauge.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the south-west slope of Mineral Mountain, one mile west of Animas Forks, Eureka district; located in 1881; owners Charles McLoyd, I. K. Mackmer, and A. P. Creswell, all Animas Forks; vein a fissure twenty feet wide, with several pay streaks, aggregating twenty-four inches in width, containing copper pyrites and galena in a quartz gangue, milling, when sorted, fifty ounces silver and from a trace to one ounce gold per ton; developments—four open cuts with ten-foot faces each, one ten-foot shaft, and two tunnels twenty and fifty feet long, respectively; in connection with which is one mill site, viz., Hoosac and Broad-gauge, five acres, adjoining the claims.

**Horseshoe and Berkshire Boy.**—Two claims, 300x1500 feet each; situated on the east side of Mineral Gulch, one quarter mile east of Red Mountain City, Red Mountain district; located in December, 1882, and January, 1883, respectively; owners of the former: Stephen Allison, Henry McDowell, and John Carver, all Silverton; and of the latter Anson H. Bridgman, Henry McDowell, and Robert Hanna, all Silverton, and C. W. Allen, Denver; ore body probably a deposit, a fourteen-foot-face cut on each claim showing galena and copper sulphates of the same character as that in Durham and Tanner Boy.

**Hunt Placer.**—Sixty acres; situated on the Animas River, one quarter mile south of Animas Forks, Eureka district; located in July, 1882; owned by J. R. Hunt, C. E. Kimber, and Fred Harris, all Animas Forks; developments—one flume 1,600 feet long, three feet wide, and two feet deep, and 600 feet of ditching. Tests on this property have shown as much as fifteen cents in gold to the pan.



**I. X. L. Group.**—Two claims, 300x1500 feet each; situated on Cement Creek, one mile north of Gladstone, Eureka district; located in 1880; owners Charles Anderson and G. N. Richardson, both Silverton; veins both fissures, in the I. X. L. four feet wide, pay streak ten inches, containing quartz and galena, assaying twenty-five ounces silver per ton; developed by two open cuts with ten and twenty foot faces, and in the other claim, varying in width and containing a fair material.

**Idaho, No. 1 and No. 2.**—Two adjoining claims on same vein, 300x1500 feet each; situated on the west slope of Kendall Mountain, one-fourth mile east of Silverton, Animas district; located in 1873, and in process of patent; owners David Olson and James Morrison, both Silverton, Peter Robertson, Lake City, and John Shaw, Del Norte; vein a fissure from six to eight feet wide, pay streak from fifteen to twenty-five inches, containing copper and iron pyrites in a quartz gangue, milling, when sorted, from five to ten per cent copper, thirty-five ounces silver, and one ounce gold per ton; developed by two drifts 40 and 140 feet long and some openings on the vein from ten to fifteen feet in depth.

**Independence Group.**—Owned by A. B. Wattle, Silverton; group comprises eleven claims, 300x1500 feet each; situated on the west slope of Boulder Mountain, three and one-half miles north of Silverton, Animas district; Independence, Pride of Cement, and South-western, three adjoining claims on the same vein (a fissure), ten feet wide, pay streak five feet, containing quartz, with galena, gray and yellow copper, and iron pyrites, assaying forty ounces silver per ton; developments—on first, one tunnel 130 feet long, designed to cut vein at depth of 200 feet; on the second, one tunnel 140 feet long, cutting vein at depth of 150 feet, and on the last, one tunnel seventy feet long; and located, respectively, in 1878 and 1880; Colorado Belle vein four feet wide, pay streak twenty inches, containing gray and yellow copper, assaying twenty-five ounces silver per ton; developed by one ten-foot-face cut, and located in 1880; Hattie vein four feet wide, pay streak five inches, containing quartz; gray copper, assaying sixty ounces silver per ton; developed by one open cut thirty feet long, with a sixteen-foot face, and located in 1880; Loolah vein four feet wide, containing quartz with iron pyrites; developed by one ten-foot-face cut, and located in 1880; Chieftain vein twelve feet wide, containing quartz; developed by one twelve-foot-face cut, and located in 1880; Early Rose vein three feet wide, pay streak eighteen inches, containing mineralized quartz, gray and yellow copper, and sulphur; developed by one twelve-foot-face cut, and located in 1880; Monte Rosa vein thirty feet wide, containing mineralized quartz; developed by one thirty-foot tunnel, and located in 1879; Royal Tiger vein six feet wide, containing mineralized quartz; developed by one fourteen-foot-face cut, and located in 1882; and Illinois Central vein thirty feet wide, containing mineralized quartz; developed by one fifteen-foot-face cut, and located in 1880.

**Indian Chief.**—300x1500 feet; situated at the head of Cement Creek, ten miles north of Silverton, Red Mountain district, and located in 1875; owner James Robin, Silverton; vein a fissure six feet wide, pay streak ten inches, containing galena in a quartz gangue, milling, when sorted, twenty-five ounces silver per ton; developed by three drifts, 110, 25, and 20 feet long.

**Indian Chief Mining Company (The).**—Incorporated under the laws of Colorado, in 1879; manager, S. W. Raymond, Animas Forks;

office corner Madison Avenue and Loomis street, Chicago, and Animas Forks; owns Indian Chief and Indian Chief Extension, two adjoining claims on the same vein, 300x1500 feet each; situated on the east slope of Mountain Queen Mountain, four miles west of Animas Forks, Eureka district, and patented in 1881; vein a fissure twenty feet wide, pay streak from six to sixty inches and probably averaging twenty-four inches, containing galena and iron pyrites in a quartz gangue, milling, when sorted, thirty-five per cent lead and forty-five ounces silver per ton; developed by two drifts 200 and 20 feet long, respectively, with some other workings; improvements—ore-house, boarding-house, etc,

**International.**—(See Robert Blum and International.)

**Iowa.**—300x1500 feet; situated in Arastra Lake Basin, four miles north-east of Silverton, Animas district; located in 1875, and patented in 1881; owners J. W. Collins and Jno. O'Neil, both Silverton, and Cranston Gregg, Tin Cup; vein a fissure eight feet wide, with a number of pay streaks aggregating thirty inches in width, containing galena in a quartz gangue, milling, when sorted, fifty-five per cent lead, one-half ounce gold, and fifty-five ounces silver per ton; developed by two shafts fifteen feet deep each and one tunnel thirty feet long.

**Irene.**—300x1500 feet; situated on the east slope of Tower Mountain, one and one-half miles north-west of Howardsville, Animas district, and located in August, 1882; owners J. H. Soward and Doyle Bros., all Howardsville; vein a fissure thirty inches wide, containing lead carbonates, assaying twenty per cent lead and twenty ounces silver per ton, in a decomposed gangue; developments—a twenty-foot shaft.

**Iron.**—300x1500 feet; situated on the west slope of Kendall Mountain, one mile east of Silverton, Animas district, and located in October 1881; owners E. Bielefeldt, John M. Gundry, Jno. F. Williams, and Jno. R. Perry, all Silverton; vein a fissure ten feet wide, pay streak from five to eight feet, containing magnetic iron with some galena and yellow and gray copper, milling, when sorted, fifty per cent lead and seventy ounces silver per ton; developed by two open cuts with twelve-foot faces each.

**Iron.**—300x1500 feet; situated in Boulder Gulch, two and one-half miles north of Silverton, Animas district; located in 1879, and in process of patent; owners J. L. Day and John Murphy, both Silverton; vein a fissure twenty feet wide, containing two pay streaks twenty-four and forty-eight inches, containing galena, gray and yellow copper, in a quartz gangue, milling, when sorted, fifty per cent lead and sixty ounces silver per ton; developed by a seventy-five-foot drift and a twenty-five-foot shaft.

**Iron Chest Group.**—Six claims, 300x1500 feet each, viz.: Iron Chest, and five others crossing it; situated in Ice Lake Basin, eight miles west of Silverton, Animas district; located in June, 1881; owner S. M. Huston, Pandora; vein a fissure four feet wide, pay streak thirty inches, containing gold-bearing quartz, assaying from $100 to $200 per ton; developed by one twelve-foot shaft and one 100-foot-face open cut.

**Iron City Silver Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, H. J. Gourley; secretary and treasurer, James McEwen—both Pittsburgh; office 49 Wood street, Pittsburgh; owns four claims, 300x1500 feet each, viz.: Dakota and Rowdy Boy, two adjoining claims on same vein; situated in Boulder Gulch, four miles north of Silverton, Animas district; located in 1877 and 1881, and patented in 1882; vein a fissure thirty feet wide, pay streak from twenty to



twenty-four inches, containing pockets of tellurium in a quartz gangue, milling, when sorted, an average of $50 per ton in gold and silver, and occasionally as high as $175 per ton; developments—on the former a seventy-foot drift and a thirty-foot shaft from bottom of drift, and on the latter one fifty-foot drift; La Plata Miner and G. W., situated on the south slope of Lookout Mountain, seven miles west of Silverton, Animas district; located in 1879, and patented in 1882; veins both fissures five and four feet wide, respectively, pay streak ten inches each, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and fifty ounces silver, in the first claim, and iron and copper pyrites in a quartz gangue, milling, when sorted, thirty ounces silver, in the latter named; developed by a cross-cut twenty feet long, with a twelve-foot shaft from bottom of cross-cut, on the La Plata Miner, and a forty-foot shaft on the G. W.

**Iron Monarch.**—300x1500 feet; situated in Minnesota Gulch, five miles north of Silverton, Red Mountain district; located in May, 1882; owner H. M. Ward, Silverton; vein a fissure ten feet wide, containing quartz, galena, yellow and gray copper, and iron pyrites, assaying from 5 to 600 ounces silver per ton; developed by one sixty-foot drift.

**J. W. Collins.**—300x1500 feet; situated in Arastra Lake Basin, four miles north-east of Silverton, Animas district, and located in June, 1882; owners J. W. Collins and Theo. B. Comstock, both Silverton, and J. W. Jamieson, Del Norte; vein a fissure three feet wide, pay streak twelve inches, containing galena, assaying thirty ounces silver and $35 gold per ton, in a quartz gangue; developed by one fifteen-foot-face cut.

**Jennie Parker Mining Company (The).**—Incorporated under the laws of Colorado in March, 1882; secretary and treasurer, A. M. Wright, Chicago; agent, H. P. Roberts, Silverton; office 26 and 28 Chamber of Commerce, Chicago, and at Silverton; owns the Jennie Parker lode, 300x1500 feet; situated on the south-east slope of Sultan Mountain, one and one-half miles south of Silverton, Animas district; located in 1876, and patented in 1878; vein a fissure five feet wide, pay streak from six to twenty-two inches, and probably averaging ten inches, containing galena and gray and yellow copper, assaying thirty-five per cent lead, thirty ounces silver, and some gold per ton, in a quartz gangue; developed by one shaft 150 feet deep, with 200 feet of drifting from the bottom of the shaft.

**Joe and John.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district, and located in June, 1882; owners John Mullowney and Jas. A. Nock, both Red Mountain Town; vein a fissure varying in width, pay streak seven feet, containing galena and lead carbonates in a quartz gangue, milling, when sorted, forty-two per cent lead and fourteen ounces silver per ton; developed by one ten-foot-face cut and one forty-foot tunnel, cutting the vein fifteen feet deep.

**Kalamazoo.**—300x1500 feet; situated in Burns' Gulch, one and three-fourths miles south of Animas Forks, Eureka district, and located in 1878; owners Ed. M. and S. L. Brown, both Animas Forks, and H. E. Hoyt and —— Kauffer, both Kalamazoo, Mich.; vein a fissure three and one-half feet wide, pay streak eight inches, containing quartz, antimonial copper, and galena, assaying eight per cent copper and forty ounces silver per ton; developed by an open cut and drift thirty feet long, twenty feet of which is under cover.

**Kalamazoo Bonanza Mining Company (The).**—Manager, H. E. Hoyt, Kalamazoo, Mich.; owns the Bonanza, 1500x300 feet; situated on the Poughkeepsie Gulch slope of Mineral Point Mountain, twelve

miles from Silverton, Uncompahgre district; located in 1877, and patented; vein a fissure, probably twenty feet wide, the ore contents of which are gray copper and galena, with some brittle silver, in a gangue and vein-matter of baryta and quartz, milling, when sorted, from 50 to 150 ounces silver per ton; the developments consisting of about 800 feet of work, showing large ore-reserves, with several hundred tons lying on the dumps awaiting shipment.

**Kane.**—300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile north-east of Chattanooga, Red Mountain district, and located in February, 1883; owners Jno. C. Kane, J. R. Lancaster, and F. M. Carell, all Chattanooga; vein a fissure five feet wide, pay streak eight inches, containing copper-stained quartz carrying galena; developed by one ten-foot-face cut and one ten-foot tunnel from end of cut.

**Kansas City-San Juan Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in October, 1882; capital stock $3,600,000, in 360,000 shares of $10 each, non-assessable; president, Geo. H. Nettleton; secretary, Robert Moody—both Kansas City; manager, A. L. Harris, Durango; offices Kansas City and Durango; owns sixteen claims, 300x1500 feet each, viz., Kansas City, Deardorff, J. L. Barnes, Col. Sellers, Cataract, Silver Thread, Closier, Pride of the West Extension, Philadelphia Extension, Little Fannie Extension, Delia, Nettleton, Golden Crown, L. S. Cady, G. P. Olmstead, and Kansas City Extension; situated on the west slope of Green Mountain, two and one-half miles from Howardsville, Animas district; located from 1876 to 1878; Pride of the West Extension patented, and Kansas City, Deardorff, Col. Sellers, and Silver Thread in process of patent; veins all fissures from five to fifty feet wide, pay streaks from three to sixteen inches, containing quartz, galena, gray copper, and occasionally some brittle and wire silver, assaying from 25 to 100 ounces silver per ton; developed by four tunnels, 380, 200, 75, and 60 feet long, respectively, and twenty feet of work in addition on each of the claims, in the shape either of open cuts, shafts, or adits; and the Kansas City Tunnel site, 3000x1500 feet, on which four tunnels are being driven for the development of the entire property.

**Kate Gibson.**—(On Mastodon vein); 300x1500 feet; situated in Placer Gulch, one and one-half miles south-west of Animas Forks, Eureka district, and located in July, 1875; owners E. E. Gibson, Animas Forks, J. E. Hall and F. A. Noltze, both Cleveland, Ohio; vein a fissure thirty feet wide, pay streak at least twenty-four inches, containing galena, iron and copper pyrites, in a quartz gangue, milling, when sorted, twenty per cent lead and fifteen ounces silver per ton; developed by one fifteen-foot shaft and two openings on the vein.

**King.**—300x1500 feet; situated on the north-east slope of Sultan Mountain, two miles south of Silverton, Animas district; located in 1876; owners Thos. Cain, Robert Roberts, and Hugh Davis, all Silverton; vein a fissure, four feet wide, pay streak fourteen inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty per cent lead and 125 ounces silver per ton; developed by one shaft forty feet deep and two tunnels 40 and 100 feet long, the latter cutting the vein at a depth of 125 feet; output ten tons.

**King Solomon.**—(See French Boys Silver Mining Company.)

**King Solomon Mountain Tunnel and Mining Company (The).**—Incorporated under the laws of Colorado, in October, 1881; capital stock $500,000, in 10,000 shares of $50 each, non-assessable; president, Jas. L. Barbour; vice-president, Frank Lewis; secretary, J. T. Dyer; treasurer, F. W. Pratt—all Washington, D. C.; superintendent, Pat. O'Brien, Howardsville; offices 1,001 F street, Washington, and at Howardsville; owns the King Solomon Mountain Tunnel site; on which a tunnel is driven 400 feet long, showing a vein of gray and yellow copper along one side of the tunnel three feet wide, milling, when sorted, ten per cent copper and forty ounces silver per ton, and designed to cut the veins in the following lodes: Katie and Mother of Solomon, two adjoining claims on the same vein, a fissure, 100 feet wide, with several pay streaks from six to thirty inches wide, containing galena and quartz, milling, when sorted, sixty ounces silver per ton; Hancock four feet wide, containing galena and quartz, assaying thirty ounces silver per ton at the surface; each developed by an open cut with a twenty-foot face; Alabama ten feet wide, with two pay streaks twenty-four and thirty-six inches wide, containing galena and quartz, assaying sixty ounces silver per ton; developed by a sixty-foot shaft, in mineral all the way; 300x1500 feet each; situated on the west slope of King Solomon Mountain, three-fourths mile south-west of Howardsville, Animas district; Katie patented in 1882, and the others in process.

And owns a concentrator; situated on the Animas River, one-half mile south of Howardsville, containing one Blake Crusher, two sets of Cornish Rolls, three Hartz Jigs (Fraser & Chalmers' make), one Frue Vanner, four revolving screens, pumps, etc.; motive power supplied by a forty-inch Leffel Wheel, with eighteen-foot head; capacity twenty-five tons per day (twenty-four hours).



**King Tunnel.**—3000x6 feet; situated on Cement Creek, one-fourth of a mile north of Gladstone, Animas district, and located in March, 1882; on which a tunnel is driven 182 feet long, designed to cut the vein in Miami, Big Quartz, and Rio Don claims, 300x1500 feet each; located at same time, and containing fissure veins, eight, six, and two feet wide, respectively, of mineralized quartz.

**Kingdom.**—300x1500 feet; situated on the north slope of Sultan Mountain, one and a half miles south of Silverton, Animas district, and located in March, 1876; owner Henry Gillett, Silverton; vein a fissure, five feet wide, pay streak from four to twenty-four inches, and averaging twelve inches, containing galena, gray and yellow copper, and quartz, assaying thirty-five per cent lead, ten per cent copper, from $5 to $10 gold, and thirty ounces silver per ton; developed by one shaft thirty feet deep.

**Lackawanna Group.**—Ten claims, the first four covering 300x1500, and the other six 300x1500 feet each; situated on the north-west slope of Kendall Mountain, and in Swansea Gulch, one and a half miles east of Silverton, Animas district; located in January, 1881, and patented March, 1883; owners H. P. Roberts, T. P., Jno. J., and P. J. Higgins, and James H. Morrison, all Silverton, and Geo. H. Roberts, Ebensbury, Penn.; veins all fissures in the first four claims of the following names: No. 1 three and a half feet wide, pay streak from four to six inches, assaying forty per cent lead and thirty-five ounces silver per ton; No. 2 three and a half feet wide, pay streak from three to four inches, assaying thirty-five per cent lead and thirty ounces silver per ton; J. B. Smith five feet wide, pay streak from four to ten inches and averaging six inches in width, assaying twenty-five per cent lead and ninety ounces silver per ton; A. J. Craine six feet wide, containing mineralized quartz; the ore in each of the other lodes being galena and gray copper, with some native copper and chlorides, in a quartz gangue; developed by one tunnel 400 feet long, cutting all the above veins, with drifts on No. 1, J. B. Smith, and A. J. Craine, 25, 200, and 150 feet long, respectively, one tunnel 200 feet long on No. 2, cutting J. B. Smith vein, on which latter there is one sixty-foot shaft; in the D., L. and W. four feet wide, pay streak ten inches; in the Free Press four feet wide, pay streak ten inches; in the Jim Young four feet wide, pay streak six inches; in the Savage three and a half feet wide, pay streak eleven inches; in the T. D. Powderly three feet wide, pay streak three inches, and in the P. D.

Lacy five feet wide, pay streak fifteen inches, with mineral the same as before and of the same quality; developed by an open cut on each claim, with faces from twelve to twenty-five feet.

**Lake.**—(Extension of Washington); 300x1500 feet; situated at the head of the north fork of Eureka Gulch, four and one-half miles west of Eureka, Eureka district, and located in May, 1882; owners M. M. Engleman, Jno. D. Niswonger, and F. W. Harlow, all Eureka; vein a fissure, forty feet wide at the outcrop, a ten-foot-face open cut, in the center of the lead, showing galena and yellow copper across the entire breast, assaying twenty-four per cent lead, nine ounces silver, and one-fourth ounce gold per ton.

**Last Chance.**—300x1500 feet; situated on the west slope of Red Mountain, five and a half miles north-west of Silverton, Red Mountain district, and located in March, 1883; owners James Burrows and A. J. Pendleton, both Silverton; vein a fissure, five feet wide, containing quartz showing a heavy copper stain; developments—one cut with a ten-foot face.

**Lead King.**—(See Walla Walla, El Paso, and Lead King.)

**Lead King.**—300x1500 feet; situated in Mill Gulch, one and one-fourth miles west of Chattanooga, Red Mountain district; located in April, 1883; owners B. F. and Z. T. Larsh, both Chattanooga; vein a fissure eight feet wide, pay streak three feet, containing quartz, galena, and arsenical copper, assaying eight per cent copper, thirty-five per cent lead, and thirty ounces silver per ton; developed by one fifteen-foot-face cut.

**Lee.**—50x1500 feet; situated on Missouri Mountain, two miles from Eureka; vein a fissure four feet wide, with two pay streaks twelve and five inches, containing iron and copper pyrites, gray copper, and quartz, assaying from 15 to 150 ounces silver per per ton; developments—one twenty-five foot tunnel and one eighteen-foot-face cut.

**Lena Kate.**—300x1500 feet; situated on Cascade Creek, thirteen miles south-west of Silverton, Animas district; located in August, 1880; owners Paul Reed and —— Kent, both Rockwood; vein a fissure five feet wide, pay streak eighteen inches, containing quartz, galena, gray copper, and brittle silver, assaying fifty ounces silver per ton; developed by one 200-foot cross-cut tunnel and a drift twenty-five feet long.

**Leo.**—Owned by Alanson Hall, Middleton; claim 300x1500 feet; situated at the mouth of Maggie Gulch, at Middleton, Eureka district; located in April, 1879; vein a fissure twenty inches wide, pay streak nine inches, containing gray copper in decomposed porphyry, assaying from 50 to 200 ounces silver per ton; developments—a twenty-five-foot tunnel and an eighteen-foot shaft.

**Leona.**—(See McCurdy and Robinson Group.)

**Lilly and McGinty.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Burns' Gulch, two and one-half miles from Eureka, Eureka district; vein a fissure four feet wide, pay streak from one to four feet, containing galena, gray copper, and fine hematite iron, in a quartz gangue, milling, when sorted, from fifty to seventy-five ounces silver per ton; developments—two tunnels 25 and 100 feet long and some open cuts.

**Lisarney.**—300x1500 feet; adjoining Mineral Point on the south-west, Uncompahgre district; located in August, 1880; owners Charles D. Adams and James McEntee, both Mineral Point; vein a fissure six feet wide, pay



streak twenty-four inches, containing galena and gray copper and quartz, assaying twenty per cent lead and fifty ounces silver per ton; developed by a shaft forty-six feet deep.

**Little Annie.**—300x1500 feet; situated on Ruby Mesa, at the head of Limestone Creek, twelve miles south-west of Silverton, Animas district; located in September, 1882; owners Moses Noland, Samuel K. Nesbitt, and Harry R. Goff, all Rico, and Adam Lawder, Durango; vein a fissure thirty inches wide, pay streak from twelve to fifteen inches, containing lime quartz, galena, and gray copper, assaying three-fourths ounce gold and 100 ounces silver per ton; developed by one ten-foot-face cut.

**Little Carrie.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile south-east of Chattanooga; located in March, 1883; owners B. T. McGinnis and A. B. Woodruff, both Silverton; vein a fissure five feet wide, pay streak nine inches, containing quartz and galena, assaying seventy-five ounces silver per ton; developed by one ten-foot shaft.

**Little Casino.**—300x1500 feet; situated on the south-east slope of Anvil Mountain, at Silverton, Animas district; located in December, 1881; owner B. G. Puckett, Silverton; vein a fissure four feet wide, pay streak from six to ten inches, containing galena and gray copper in a porphyry gangue, assaying seventy-five ounces silver per ton; developed by a thirty-foot drift.

**Little Charley and Little Pittsburgh.**—Two claims, 300x1500 feet each; situated on the north slope of Lookout Mountain, two miles from Chattanooga, Animas district; located in 1877 and 1879, respectively; owners G. A. Ambold, Durango, and Robert A. Ambold, Silverton; vein a fissure two feet wide, pay streak from two to six inches, containing galena and gray copper, assaying sixty per cent lead and forty-five ounces silver per ton, in a quartz gangue; developed by one shaft eighty feet deep, one cut thirty feet long, and one cross-cut thirty feet long.

**Little Dora.**—300x1500 feet; situated near the mouth of Arastra Gulch, three miles east of Silverton, Animas district; located in 1881; owners Capt. P. Stanley and Oliver Matthews, both Silverton; vein a fissure three feet wide, pay streak three and one-half inches, containing quartz, galena, and gray copper, assaying thirty per cent lead and fifty ounces silver per ton; developed by an open cut and tunnel thirty feet long, fifteen feet of which is under cover, and one ten-foot-face cut.

**Little Dora Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois, in January, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; directors and officers: W. S. Patterson, president; J. B. Patterson, secretary; Hawley Allison, treasurer; C. Allison, manager; and Jno. W. Palmer; office 185 East Adams street, Chicago; legal agent, W. R. Bowman, Silverton; owns the Little Dora and Little Dora Extension, two claims, 300x1500 feet each; situated in Grouse Gulch, one mile from Animas Forks, Eureka district, and patented; vein a fissure varying in width, the vein-matter consisting of quartz, decomposed feldspar, and silurian limestone, pay streak twenty-five inches, fifteen of which contain galena, sulphurets, and probably brittle silver, in a lime-quartz gangue, in addition to which there is a gouge-matter carrying iron and gold, assaying from 20 to 800 ounces silver and sometimes a great deal of gold per ton; developments—on the former three tunuels, 40, 204, and 30 feet long, and one eighty-foot shaft, and on the latter one twenty-foot-face open cut, with a twenty-foot tunnel from the end of the cut; owns four acres of timber land adjoining the lode claims.

**Little Eva.**—300x1500 feet; situated on the north fork of Mineral Creek, three-fourths of a mile north of Chattanooga, Red Mountain district, and located in March, 1883; owners C. W. Robinson, Joseph Devine, Chas. Martin, and Michael Mackinson, all Red Mountain Town; vein a fissure four feet wide, pay streak eight inches, containing quartz, galena, and gray copper, assaying 150 ounces silver per ton; developments—one open cut with ten-foot face.

**Little Giant Group.**—Four parallel claims, 300x1500 feet each; situated on Little Giant Mountain, four and one-half miles north-east of Silverton, Animas district; located in June, 1876; veins all fissures as follows: in the Bonanza twenty feet wide, pay streak four feet, containing quartz, galena, and iron and copper pyrites, milling, when sorted, twenty-five ounces silver per ton; developed by a cross-cut twenty feet long and a thirty-foot drift from end of cross-cut; in the Lincoln three feet wide, pay streak twelve inches, containing copper pyrites and gold quartz, milling, when sorted, ten ounces silver and from one and one-half to two ounces gold per ton; developed by one twenty-five-foot shaft; in the Mackinaw five feet wide, pay streak fourteen inches, containing galena in a quartz gangue, milling, when sorted, forty-five per cent lead and forty-five ounces silver per ton; developed by one forty-foot drift; and in the Saginaw two and one-half feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developed by one forty-foot drift; owners Jno. L. Hall, Silverton, and Thos. Merrill and others, Saginaw, Mich.

**Little Ida.**—300x1500 feet; situated in Minnesota Gulch, four miles north of Silverton, Animas district, and located in October, 1882; owners E. S. Ferguson, Geo. Cook, and others, all Silverton; vein a fissure forty feet wide, containing twenty feet of quartz with galena, assaying from ten to twenty ounces silver per ton; developments—one sixteen-foot open cut with a thirteen-foot tunnel from end of cut.

**Little Luthey.**—(See Cascade Mining Company.)

**Little Mattie.**—300x1500 feet; situated in Ohio Gulch, three and one-half miles north of Silverton, Animas district, and located in August, 1882; owners E. S. Ferguson, Geo. Cook, and Thomas Blair, all Silverton; vein probably a fissure, twenty feet wide, containing four feet of quartz, galena, gray copper, and iron pyrites, assaying twenty-five per cent lead and forty ounces silver per ton; developed by a tunnel thirty-two feet long.

**Little Maud.**—300x1500 feet; situated in Mill Gulch, one mile west of Chattanooga, and located in February, 1883; owners Samuel Barr, James Fraser, James Brown, Robert Lane, and Miles McCue, all Chattanooga, and S. S. Watson, Red Mountain Town; vein a fissure four feet wide, pay streak ten inches, containing galena and copper pyrites in a quartz gangue; developed by one ten-foot-face cut and one twenty-foot drift.

**Little Mollie.**—250x1500 feet; situated on the north slope of Sultan Mountain, one and one-fourth miles south of Silverton, Animas district, and located in December, 1882; owner Matthew Moyle, Silverton; vein a fissure twelve feet wide, pay streak eighteen inches, containing quartz, with specks of galena and gray copper; developed by a shaft twenty feet deep and a tunnel 100 feet long, designed to cut the vein 150 feet deep.

**Little Ollie.**—Owners Fred. J. Candee, Eureka, and A. W. Smith, Silverton; claim 300x1500 feet; situated on the west slope of Jones Mountain, one and one-fourth miles north of Eureka, Eureka district, and located in 1882; vein a fissure from five to six feet wide, pay streak ten inches, containing galena and iron pyrites, assaying twenty per cent lead and twenty-five ounces silver per ton, in a quartz gangue; developed by a forty-five-foot tunnel on the vein.



**Lonergan.**—300x1500 feet; situated on the south-west slope of Galena Mountain, one and one-half miles south-west of Eureka, Animas district, and located in June, 1880; owners F. R. Hamilton, San Miguel City, C. J. and Geo. J. Hamilton and C. S. Montague, all Muskegan, Mich., Barlow, Davis & Co., Trumbull, Peter Lonergan, Ashcroft, and others; vein a fissure seven feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, twenty-five per cent lead and sixty-five ounces silver per ton; developed by two open cuts twenty feet long each.

**Lookout.**—300x1500 feet; situated on the east slope of Red Mountain, two miles north-east of Red Mountain City, Red Mountain district, and located in March, 1883; owners W. H. Andrews, Red Mountain City, Henry McDowell, Silverton, and W. H. Weddington and Miller Bros., all Durango; vein probably a fissure, three and one-half feet wide, containing quartz, with galena, gray copper, and sulphurets; developed by one ten-foot-face cut.

**Lowville.**—300x1500 feet; situated on the north slope of Round Mountain, four miles north-east of Silverton, Animas district, and located in 1875; owners J. W. Collins and J. H. Reed, both Silverton, and Louis Gathmann, Chicago; vein a fissure ten feet wide, pay streak sixteen inches, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and forty ounces silver per ton; developed by one cross-cut twenty-five feet long and one shaft from end of cross-cut thirty feet deep.

**Lucky Boy.**—300x1500 feet; situated on the west slope of Red Mountain, six miles north-west of Silverton, Red Mountain district; located in January, 1883; owners Thos. Cain and Ed. Gorman, both Silverton; ore body probably a deposit, an open cut with a twenty-four-foot face showing galena and arsenical copper in quartz all across the bottom and on the sides, assaying ten per cent copper, thirty per cent lead, and thirty ounces silver per ton.

**Lulu.**—300x1500 feet; situated in Grouse Gulch, one and one-half miles from Animas Forks, Eureka district, and patented; owner P. N. Nicholas, Geneva, N. Y.; vein a fissure thirty inches wide, pay streak fifteen inches, containing iron and copper pyrites and galena in a quartz gangue, assaying fifty ounces silver per ton, but the croppings in some places run much higher; developments—one forty-foot cross-cut, from the end of which is a 100-foot drift on the vein, thirty feet of drifting above, and another tunnel started.

**M. D.**—Owners W. J. Forsyth and Albert Bernard, both Howardsville; claim 300x1500 feet; situated in Cataract Gulch, three-fourths mile north of Howardsville, Animas district; located in 1880; vein a fissure eight feet wide, containing quartz and galena, assaying sometimes as high as 140 ounces silver per ton; developed by three open cuts with ten, twelve, and fifteen foot faces.

**Madison.**—300x1500 feet; situated on the north-east slope of Sultan Mountain, two miles south of Silverton, Animas district; located in June, 1880; owners Thos. Cain and Robert Roberts, both Silverton; vein a fissure three and one-half feet wide, containing quartz with streaks of galena and gray and yellow copper, assaying thirty-five ounces silver per ton; developments—one shaft twenty-five feet deep.

**Maid of the Mist.**—300x1500 feet; situated in Mill Gulch, eight miles north-west of Silverton, Red Mountain district; located in 1879; owners F. G. Burnett and J. R. Penoier, both Ouray; vein a fissure six feet wide,

containing quartz with galena, zinc, and iron pyrites, assaying thirty-five ounces silver and one-fourth ounce gold per ton; developed by an open cut thirty feet long and a shaft ten feet deep.

**Martha and Dounans Group.**—Four claims, 300x1500 feet; situated on the east slope of Tower Mountain, three-fourths mile north-west of Howardsville, Animas district; located in January, 1882; owner Louis Meyer, Howardsville; veins all fissures, as follows: in the Martha sixteen feet wide, containing six feet of quartz with galena and gray and yellow copper; developed by a twenty-six-foot tunnel and an eighteen-foot-face cut; in the Dounans eight feet wide, pay streak four inches, containing galena and copper pyrites; developments—a twelve-foot-face open cut; in the Moselle from fourteen to sixteen inches wide, containing mineralized quartz; developments—a twelve-foot-face cut; and in the Manasseh eighteen inches wide, containing quartz carrying galena; developments—a twelve-foot-face open cut.

**Martha Rose Smelting and Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, A. M. Clapp; vice-president, L. G. Hime; secretary and superintendent, Dr. S. R. Beck; treasurer, G. H. B. White; general manager, Arthur Macy—all Washington, D. C.; office Washington, D. C.; owns a smelting-works (constructed by Fraser & Chalmers), situated at Silverton, containing one Blast-furnace, two Roasters, Blake Crusher, Cornish Rolls, engine, boiler, etc.; capacity ten tons per day (twenty-four hours).

**Mary Ann and Weltry Ann.**—Two adjoining claims on the same vein, 300x1500 feet; situated on Cement Creek, nine miles north of Silverton, Eureka district, and located in February, 1883; owners John Stadelman, Chris. Miller, Bret Wahl, and John C. Burnett, all Silverton; vein a fissure three feet wide, containing galena and quartz, assaying twenty-three per cent lead and fifty ounces silver per ton; developments—three cuts with ten-foot faces each.

**Mastodon Mining and Reduction Company (The).**—Incorporated under the laws of Colorado in September, 1877; capital stock $300,000, in 3,000 shares of $100 each, one-half assessable and the other non-assessable; president Lyman Strong; secretary, Jesse N. Squire; treasurer, J. T. Wamelink; general manager, Alfred A. Hard—all Cleveland; office 376 Superior street, Cleveland, and Animas Forks; owns the Mastodon, 300x1500 feet; situated at the head of Placer Gulch, two and one-half miles west of Animas Forks, Eureka district, and patented in 1880; vein a fissure 300 feet wide, containing quartz, fifty feet of which is a concentrating-ore, composed of galena, yellow copper, and some iron pyrites, gray copper, and gold, in a quartz gangue, milling, when sorted, from fifteen to twenty per cent lead, fifteen ounces silver, and one-half ounce gold per ton; developed by 650 feet of tunneling, and the Company has decided to erect a concentrating-works during the present summer for the treatment of their ores.

**Maude.**—300x1500 feet; situated on Cement Creek, two miles north of Silverton, Animas district, and located in 1882; owners Robert Roberts and Robert Collistar, both Silverton; vein a fissure four feet wide, containing quartz, with streaks of galena; developments—one fifteen-foot tunnel.

**Mayflower.**—300x1500 feet: situated on the Cascade slope of Mineral Mountain Peak, four and one-half miles east of Trout Lake, Animas district, and located in September, 1880; owners David Hemdel, Lake City, and Canute Lee, Trout Lake; vein a fissure six feet wide, with three pay streaks aggregating ten inches, containing galena and quartz, assaying fifteen per cent lead and fifty ounces silver per ton; developed by two open cuts with ten-foot faces each.



**Mayflower.**—300x1500 feet; situated on South Lookout Mountain, eight miles north-west from Silverton, Red Mountain district; located in May, 1882; owners David Chisholm, R. L. Nelson, H. H. Williams, and others, all Silverton; vein a fissure four feet wide, pay streak from twenty to twenty-four inches, containing gray copper and some galena in a quartz gangue, milling, when sorted, from 100 to 125 ounces silver per ton; developed by a tunnel 150 feet long, cutting the vein eighty feet deep, on which there is 142 feet of drifting, and a tunnel forty-two feet long, designed to cut the vein 200 feet below the surface, and one twelve-foot shaft.

**McCurdy & Robinson Group.**—Four claims, 300x1500 feet each; situated on the south-west corner of Galena Mountain, at the mouth of Stony Gulch, one mile south of Howardsville, Animas district; owners D. McCurdy, Silverton, and J. S. Robinson, Howardsville; Emma, located in 1874; vein a fissure eight feet wide, pay streak two feet, containing galena, gray and yellow copper, and quartz, assaying thirty-five per cent lead and thirty ounces silver per ton; developments—one ten-foot shaft; Leona, located in 1879; vein a fissure four feet wide, containing mineralized quartz, yielding well; developments—one ten-foot shaft; Maton, located in 1879; vein a fissure three feet wide, containing quartz, galena, and copper pyrites; developments—one twenty-foot shaft; and Daniel Boone, located in 1877; vein a fissure thirty feet wide, containing quartz and galena; developments—one ten-foot tunnel and one main tunnel 225 feet long, designed to cut all the above veins.

**McIntyre.**—(See Colorado Mining and Land Company.)

**Melville Mining and Reduction Company (The).**—Incorporated under the laws of Colorado in 1876; capital stock $200,000, in 2,000 shares of $100 each, non-assessable; president, J. P. Usher; vice-president, A. P. Clark; secretary and treasurer, T. H. Rudiger; general manager, E. Summerfield—all Lawrence, Kas.; offices Lawrence, Kas., and Silverton; owns five parallel claims, 300x1500 feet each; situated on the north slope of Sultan Mountain, one mile south of Silverton, Animas district; patented in 1882; veins all fissures, as follows: in the Empire seven feet wide, pay streak thirty inches, containing gray copper in a quartz gangue, the first-class ore milling, when sorted, from five to ten per cent copper and 100 ounces silver, and the second-class seventy-five ounces per ton; developed by two shafts 65 and 129 feet deep, respectively, and a tunnel 250 feet long, cutting the vein 129 feet deep (at which point there is 200 feet of drifting), designed to cut all the veins; in the Hercules ten feet wide, containing quartz, galena, and gray copper; developed by a drift 275 feet long; and in the Great Republic, Grand Central, and Water Witch, from five to twenty feet in width; developments—one twelve and one twenty foot shaft and one thirty-foot drift.

And owns four mill sites, five acres each, adjoining the lode claims, patented at the same time, on one of which (the Melville) is erected a Ten-stamp mill (Lixiviation-works), containing stamps, leeching-tubs, Blake Crusher, Roasting-furnace, etc.

**Meme.**—Cwned by W. G. White, Eureka; claim 300x1500 feet; situated on the west slope of Crown Mountain, one mile south of Eureka, Eureka district; located in 1876; vein a fissure two and one-half feet wide, containing galena and lead carbonates in a quartz gangue, milling, when sorted, thirty-five per cent lead and thirty-five ounces silver per ton; developed by a twenty-eight-foot drift on the vein.

**Menomine.**—300x1500 feet; situated on the south slope of Boulder Mountain, one and one-half miles north of Silverton, Animas district; owner Jno. F. Williams, Silverton; vein a fissure twenty-five feet wide, pay streak twelve inches, containing galena, gray and yellow copper, and quartz, assaying ten per cent copper, twenty-five per cent lead, and twenty-five ounces silver per ton; developed by one forty-foot drift.

**Michigan and San Juan Mining Company.**—Owns the Thunder-boldt, 300x1500 feet; situated on Lake Mountain, one-half mile from Mineral Point; vein a fissure, from five to ten feet, pay streak from one to five feet, containing galena, gray copper, and some brittle silver, in a quartz gangue, milling, when sorted, from fifty to seventy-five ounces silver per ton; developed by a thirty-five-foot tunnel and a fifteen-foot shaft; and some other claims, on which development work is being done.

**Midland Mining Company (The).**—Owns ten locations, viz., John Lee, Little Johnny, Cimarron, Niegold, Begole, Ashurst, Thoran, Grace Clifford, Pemberton, and Roedel, 300x1500 feet each; situated on the west slope of Galena Mountain, from one to two miles south-east of Howardsville, Animas district; veins all fissures, varying in width, and containing galena, copper pyrites, and copper carbonates, assaying from fifteen to sixty per cent lead and from ten to seventy-five ounces silver per ton, in a quartz gangue; and the Roedel Tunnel site, on which a tunnel about 500 feet has been run, designed to cut the veins in all the above claims at depths from 500 to 2,500 feet; additional developments—openings on the veins.

**Middle Mountain.**—Owned by Alanson Hall, Middleton; claim 300x1500 feet; situated on the south slope of Middle Mountain, three-fourths mile east of Middleton, Eureka district; vein a fissure, three feet wide, with three pay streaks aggregating twenty inches in width, containing galena and quartz, assaying from fifteen to forty ounces silver per ton; developed by a fifteen-foot-face open cut and ten-foot shaft from end of cut.

**Midnight.**—(Formerly Prince of Wales); 300x1500 feet; situated at the east base of Hurricane Peak, three miles west of Animas Forks, Eureka district; located in January, 1880; owners Fred. Harris, C. E. Kimber, and Merrill Dowd, all Animas Forks, and Emery Coons, Red Mountain Town; vein a fissure, eight feet wide, pay streak eight inches, containing gray copper and some galena in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by a ninety-foot shaft on the vein.

**Mineral King.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district, and located in November, 1881; owners Elmer King, W. F. Mayfield, and J. W. Sites, all Silverton; vein a fissure, fifteen feet wide, with two pay streaks aggregating four feet, containing galena, and black copper, and quartz, assaying ten per cent copper, thirty-five per cent lead, and eighty ounces silver per ton; developed by one drift thirty feet long.

**Mineral King.**—300x1500 feet; situated on the south slope of Round Mountain, four miles north-east of Silverton, Animas district, and located in September, 1882; owner Robert A. Ambold, Silverton; vein a fissure, thirty feet wide, with five pay streaks, four of which are from four to twelve inches, and the fifth from eight to twenty-three inches, containing galena in a quartz gangue, milling, when sorted, forty-three per cent lead and thirty-seven ounces silver per ton; developed by one twelve-foot-face cut.

**Mineral Mountain Mining Company (The).**—Incorporated under the laws of Wisconsin; capital stock $1,000,000, in 40,00 shares of $25 each, non-assessable; president, Angus Smith; vice-president and treasurer, Wm. Young; secretary, Jno. H. Hall; assistant treasurer and manager, E. B. Greenleaf; superintendent, R. Trezona; offices Milwaukee and Mineral Point; owns twenty-eight locations, viz.: Red Cloud (the most important), 120 x1500 feet, Burrows No. 2 and Deposit, adjoining it, 300x1500 each; all patented, and situated in Red Cloud Gulch, between Houghton and Mineral Point Mountain, Uncompahgre district; veins all fissures, in the Red Cloud forty feet wide, containing a quartz vein-matter and gangue, with galena, gray copper, iron and copper pyrites, and zinc blende, the last in the form of pockets and diminishing with depth, and milling, when sorted, $50 per ton; developments—over 1,400 feet of shafts, drifts, and cross-cuts, there being on the first adit level 532 feet of drifting, 265 feet of which shows an ore body from ten to fifty inches wide, and on the second level 217 feet, showing a body from five to forty inches, and a shaft sunk ninety-seven feet below the second level displays the ore in a well defined condition in the bottom, proving the continuity of the mineral in vertical depth; improvements—two steam-engines for hoisting and pumping, shaft-houses, engine-houses, boarding-houses, etc., and a large quantity of ore lies on the dumps, with immense ore-reserves in the stoping ground, awaiting cheap transportation; and in the Burrows No 2 and Deposit from two to eight feet wide, containing an ore gangue and vein-matter similar to those in the Red Cloud, the work in the Burrows No. 2 showing a fine ore body from five to thirty inches wide; the developments, in addition to those mentioned, consisting of three shafts, a cross-cut from the second adit level on the Red Cloud to the vein of Burrows No. 2, with some drifting; the work on the three claims aggregating 2,000 feet; the other claims owned by this Company are: Burrows, Burrows Extension, Dakota, Mineral Point, Mastodon, Napoleon, Vermilion, Vermilion Extension, Yankton Extension, Cleveland No. 1, Cross, Washington, Diamond, Crooke, Yankton, Wonderful, Fanny Grigsby, and Equator, 300x1500 feet each, and the Prince Albert, Denver, Victoria, Del Norte, Crystal, Lyon, and Bond, half claims each; situated in the Uncompahgre district, near Mineral Point, on which there is considerable development, all showing fairly, and partially patented.



**Mineral Queen.**—300x1500 feet; situated in Georgia Gulch, six miles west of north from Silverton, Red Mountain district; located in 1882; owner M. I. Barker, Cincinnati, O.; agent, Perry Ellis, Silverton; vein a fissure five feet wide, pay streak twenty-four inches, containing galena and quartz, assaying from forty to fifty per cent lead and twelve to fifteen ounces silver per ton; developments—one open cut with a fifteen-foot face.

**Mineral View.**—300x1500 feet; situated on the south-east slope o Lookout Mountain, six miles west of Silverton, Red Mountain district; located in June, 1877; owners Otis Ballou, Silverton, and Fenno Wakeman, Rico; vein a fissure five feet wide, pay streak fourteen inches, containing galena, gray copper, and quartz, assaying 114 ounces silver per ton; developed by one fifty-five-foot shaft and one tunnel forty-five feet long designed to cut vein 125 feet deep.

**Mineral Wonder Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in February, 1882; capital stock $400,000, in 40,000 shares of $10 each, non-assessable; president, J. D. Rollins, Silverton; secretary and treasurer, A. J. Reid; general superintendent, H. S. Crites—both Durango; offices Durango and Silverton; owns the Chalmers lode, 300x1500 feet; situated on the east slope of King Solomon Mountain, four and one-half miles north-east of Silverton, Animas district; located in August, 1877; vein a fissure six feet wide, containing galena with some quartz, three feet of which assays fifty per cent lead and sixty-three ounces silver per ton; and the other three feet twenty-five per cent lead and from twenty to forty ounces silver per ton; developed by two tunnels thirty-five and twenty-five feet long, with some other workings; and owns a number of other claims in La Plata County.

**Miner's Dream No. 2.**—300x1500 feet; situated on the west slope of Galena Mountain, one mile east of Howardsville, Animas district; located in March, 1881; owners Albert Brendle, Theo. Grobowski, and John Cotti, all Howardsville; vein a fissure three and one-half feet wide, containing quartz with galena, assaying $16 per ton; developed by a forty-six-foot tunnel.

**Minnehaha.**—300x1500 feet; situated on the west slope of Boulder Mountain, one mile east of Gladstone, Animas district; located in July, 1876; owners J. B. Rowland and G. N. Richardson, both Silverton; vein a fissure twenty feet wide, pay streak four and one-half feet, containing galena and gray copper in quartz, milling, when sorted, fifty per cent lead and thirty ounces silver per ton; developed by a tunnel 125 feet long, cutting the vein at a depth of 106 feet, on which there is eighty feet of drifting; output forty tons.

**Minnesota, Minneapolis, and Milwaukee.**—Three claims, 300x1500 feet each; situated on the west side of Mineral Creek, four miles west of Silverton, Animas district; located in May, 1882; owners Wm. Leonard, M. W. Williams, and Blair Hicks, all Silverton; veins all fissures, averaging four feet in width, pay streaks eight inches, containing quartz and galena, assaying twenty-five per cent lead and forty ounces silver per ton; developed by three open cuts, with fifteen-foot faces, one on each claim.

**Mist, Maid of the**—Owned by an English stock company; claim 300x1500 feet; situated on the Uncompahgre slope of Mineral Point Mountain, one and one-half miles from Mineral Point, Uncompahgre district, Ouray County, and patented; vein a fissure about six feet wide, pay streak from two to six feet, containing galena and gray and yellow copper in a quartz gangue, milling, when sorted, twenty-five per cent lead, ten per cent copper, and sixty ounces silver per ton; developments considerable.

**Molas.**—300x1500 feet; situated on the south slope of Silver Mountain, four miles south of Silverton, Animas district, and patented in February, 1883; owners L. W. Pattison, Red Mountain City, E. C. Sherer, Durango, and D. T. Easley, Rulo, Neb.; vein a fissure seven feet wide, pay streak sixteen inches, containing an antimonial production in a quartz gangue, milling, when sorted, 163 ounces silver per ton; developed by two shafts fifty-five feet deep each and two tunnels 220 and 90 feet long; improvements—tunnel-house, blacksmith-shop, and other buildings; output seventy-five tons.

**Moline Silver Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $125,000, in 1,250 shares of $100 each, non-assessable; president, B. C. Keator; vice-president, P. L. McKinnie; secretary, W. W. Wells; treasurer, J. S. Leas—all Moline, Ill.; manager and agent, J. R. McKinnie, Eureka; offices Moline, Ill., and Eureka; owns three claims, 300x1500 feet each, viz., Confidence, situated on the south slope of Silver Mountain, two and one-half miles west of Eureka, Eureka district; located in 1876, and patented in 1883; vein a fissure seven feet wide, pay streak three feet, containing iron and copper pyrites, with some galena and gray copper, in a quartz gangue, milling, when sorted, $30 per ton; developed by one tunnel 160 feet long, cutting the vein 100 feet deep, a sixty-foot shaft from end of tunnel, and another tunnel 440 feet long, designed to cut vein 269 feet deep; Sultana, situated on the north slope of Sultan Mountain, one and one-half miles south of Silverton, Animas district, and in process of patent; vein a fissure two feet wide, containing mineralized quartz; developed by a thirty-five-foot shaft and a fifteen-foot-face open cut; and Fire King, situated in Poughkeepsie Gulch, eleven miles north of Silverton, Uncompahgre district; located in 1875, and patented in 1882; vein a fissure six feet wide, containing quartz, galena, and iron pyrites, assaying forty ounces silver per ton; developed by two shafts twelve and thirty feet deep.



**Monarch.**—(See Alligator and Monarch.)

**Monarch.**—300x1500 feet; situated in Prospect Basin, nine miles north of Silverton, Red Mountain district, and located in 1880; owners Geo. W. Bayly, Silverton, Wm. Bayly, Durango, and John Ewing, Del Norte; vein a fissure four feet wide, containing arsenical copper and quartz, assaying fifteen per cent copper and ten ounces silver per ton; developed by one open cut with a fifteen-foot face.

**Monitor and White Cloud.**—Two claims, 300x1500 feet each; situated on the south slope of Carbonate Mountain, five miles north-west of Silverton, Animas district, and located in March, 1883; owners Geo. P. Chiles and Ed. F. Snook, both Lake City; vein probably a contact, a forty-foot open cut and tunnel, eighteen feet of which are under cover, on the former, and a ten-foot-face cut on the latter, showing a six-foot horizontal stratum of hard and soft carbonates of lead in a decomposed gangue.

**Monopole and Washington.**—Two adjoining claims on the same vein, 300x1500 feet and five acres, respectively; situated on the north-west end of Green Mountain, one and one-half miles east of Howardsville, Animas district; located in July, 1881; owners Jno. Cotti and others, Howardsville; vein a fissure five feet wide, containing quartz, with galena and yellow copper; developed by a ten-foot-face cut on each lode and a tunnel fifty-two feet long, designed to cut the vein 125 feet deep.

**Monte Christo.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district; located in March, 1883; owned by W. C. Edwards and M. M. Smith, both Red Mountain Town, and Wm. Sullivan, Silverton; vein probably a fissure, ten feet wide, pay streak twenty-four inches, containing decomposed porphyry carrying bunches of galena, assaying seventy per cent lead and fifteen ounces silver per ton; developed by an open cut with a ten-foot face.

**Montezuma.**—300x1500 feet; situated on the north slope of Sultan Mountain, two and three-fourths miles south of Silverton, Animas district, and located in 1879; owners Frank and Andrew Robbins, both Silverton; vein a fissure six feet wide, pay streak from three to eight inches, containing galena and copper in a quartz gangue, milling, when sorted, twenty-five per cent lead and fifty ounces silver per ton; developed by two open cuts with twelve-foot faces each and one drift twenty feet long.

**Morning Star.**—300x1500 feet; situated in Poughkeepsie Gulch, ten and one-half miles north of Silverton, Uncompahgre district, and located in June, 1878; owners Charles G. Carlstram, Animas Forks, and Charles Anderson, Ouray; vein a fissure eight feet wide, pay streak thirty-six inches, containing galena and iron pyrites in a quartz gangue, milling, when sorted, forty-five per cent lead and seventy-five ounces silver per ton; developed by a shaft twenty-five feet deep and a cross-cut tunnel fifteen feet long.

**Moultrie Mining Company (The).**—Incorporated under the laws of Colorado in August, 1880; capital stock $450,000, in 45,000 shares of $10 each, non-assessable; president, J. H. Skeele; secretary, E. H. Reed; treasurer, W. C. D. Grannis—all Chicago; superintendent and agent, Fred. J. Candee, Eureka; office 232 South Water street, Chicago, and Eureka; owns the Moultrie lode, 300x1500 feet; situated at the head of the north fork of Eureka Gulch, four and one-half miles west of Eureka, and patented in 1878; vein a fissure from six to eight feet wide, with several pay streaks, aggregating twenty-four inches in thickness, and containing galena and some gray copper and iron pyrites in a quartz gangue, milling, when sorted, from twenty to

twenty-five per cent lead and fifty ounces silver per ton; developed by a shaft sixty-five feet deep and a twenty-five-foot drift from bottom of shaft, with several openings on the vein.

**Mound.**—(West extension of Bill Young); owned by A. W. Burrows, Del Norte; claim 300x1500 feet; situated on the east face of Mineral Point Mountain, at Mineral Point, Uncompahgre district; vein a fissure, and although only slightly developed, showing some of the characteristics of the Bill Young.

**Mountain Beauty.**—300x1500 feet; situated in Palfrey Basin, eight miles east of Telluride, Red Mountain district, and located in July, 1880; owners M. A. Wood and Chas. S. Watson, both Telluride; vein a fissure twenty inches wide, pay streak nine inches, containing gold and silver bearing quartz, assaying $25 per ton; developed by one eleven-foot shaft and one ten-foot-face open cut.

**Mountain King.**—(Extension of Excelsior); 300x1500 feet; situated in Placer Gulch, two miles west of Animas Forks, Eureka district, and located in 1878; owned by C. H. Bent, Lake City, and H. J. Hall, Chicago; vein a fissure fifty feet wide, with numerous pay streaks of mineralized quartz; developments—three open cuts with ten-foot faces each.

**Mountain Queen.**—300x1500 feet; situated on the west fork of the Animas River, three miles south-west of Animas Forks, Eureka district, and located in 1881; owners J. P. Merrill, Chicago, and Chas. H. Toll, Denver, and others; vein a fissure 100 feet wide, pay streak four feet, containing galena, assaying fifteen ounces silver per ton at the surface, and improving with depth, assaying at a depth of 100 feet 200 ounces; developed by a shaft 100 feet deep and several openings on the vein.

**Mountain Rat.**—300x1500 feet; situated in Deadwood Gulch, two miles south-east of Silverton, Animas district, and located in September, 1880; owners Matthew and James Moyle and A. L. Calhoun, all Silverton; vein a fissure four and one-half feet wide, pay streak two inches, containing galena and gray copper, assaying 300 ounces silver per ton, in a quartz gangue; developed by two drifts twelve and fourteen feet long, respectively.

**Mulvey Group.**—Four claims, 300x1500 feet each; situated on the west slope of Galena Mountain, two miles south-east of Howardsville, Animas district; located in 1876; owners Robert A. Ambold and Michael Riley, both Silverton, and Philip Zang, Denver; veins all fissures, as follows: in the Acton from three to five feet wide, pay streak from sixteen to forty-eight inches, containing galena and copper pyrites in quartz, milling, when sorted, thirty-eight per cent lead and twenty-one ounces silver per ton; developed by two shafts ten and thirty feet deep, respectively; in the Capleton from five to eight feet wide, pay streak five feet, containing quartz and galena, which assay thirty-eight per cent lead and twenty-one ounces silver per ton; developed by one eighteen-foot-face cut and one seventy-foot tunnel, designed to cut vein 300 feet deep; in the Seven-thirty three feet wide, pay streak eighteen inches, containing galena and copper pyrites and quartz, assaying thirty-eight per cent lead and twenty-one ounces silver per ton; developed by a twenty-foot tunnel; in the Pride of Galena five feet wide, pay streak from two to three feet, containing galena and copper pyrites and quartz, assaying thirty-eight per cent lead and twenty-one ounces silver per ton; developed by two twelve-foot-face cuts and one tunnel ninety feet long, designed to cut veins 150 feet deep.

**Napoleon Extension.**—300x1500 feet; situated on the north slope of Houghton Peak, one and one-half miles north of Animas Forks,



Eureka district; located in 1875; owned by Stanley Larson, Friendville, Neb., and Moritz Stockder, Lake City; vein a fissure, sixteen feet wide, pay streak sixteen inches, containing galena and gray and yellow copper in a quartz gangue, milling, when sorted, thirty ounces silver per ton; developments—one eighteen-foot shaft, and cabin on claim.

**Nasby.**—300x1500 feet; situated at the mouth of Eureka Gulch, in Eureka, Eureka district; located in 1876; owners Fred. Blaisdell and Jno. D. Niswonger, both Eureka; vein a fissure, four feet wide, pay streak twenty-four inches, containing galena and yellow copper with some quartz, assaying $40 gold and twenty ounces silver per ton; developments—a fifteen-foot tunnel and ten-foot-face open cut.

**Neptune and Argentine.**—Two claims, 300x1500 feet each; situated in Boulder Gulch, three miles north of Silverton, Animas district; located in 1875 and 1878, and Neptune patented in 1882; owner Peter Fassbinder, Durango; veins both fissures, in the former five feet wide, pay streak from twenty to thirty inches, containing sulphurets in a quartz gangue, milling, when sorted, forty ounces silver and two and one-half ounces gold per ton; developed by one ninety-two-foot tunnel and three open cuts with ten-foot faces each, and on the latter one twenty-three-foot tunnel.

**New Era.**—300x1500 feet; situated on the top of Tower Mountain, one mile north of west from Howardsville, Animas district; located in July, 1881; owners J. H. Soward, Garrett H. Doyle, and J. R. Bainbridge, all Howardsville, and J. L. Hackett, Louisville, Ky.; vein a fissure, three feet wide with two pay streaks, one on the hanging-wall twenty inches and one on foot-wall eight inches wide, containing galena and yellow copper in quartz, milling, when sorted, sixty per cent lead and fifty ounces silver per ton; developments—an open cut twenty feet long with a fifteen-foot face.

**New York.**—300x1500 feet; situated in Mineral Gulch, three-fourths of a mile north of Chattanooga, Red Mountain district, and located in March, 1883; owners A. Johnson, H. G. Dorr, and P. Christman, all Chattanooga, and D. J. Shaw, Durango; vein a fissure four feet wide, pay streak twenty inches, containing quartz with iron and copper pyrites and some galena; developments—one ten-foot face cut.

**Niagara Consolidated Mining and Reducing Company (The).**—Owns the Cuba, McAlpine, McKenney, Alta, Money Musk, American, Outlook, Junction, Tyrol, Pride of San Juan, Tabor, Cleveland, Central Cross, and Boomerang, 300x1500 feet each; situated in Niagara Gulch, one-half mile from Eureka, Eureka district; veins all fissures from two to ten feet wide, pay streaks from six to thirty inches, containing galena, gray and yellow copper, bismuth, and sometimes gold in a quartz gangue, milling, when sorted, from $25 to $150 per ton; developments—cross-cuts, levels, shafts, winzes, etc., and are considerable.

**Nicodemus.**—300x1500 feet; situated in Boulder Gulch, two miles north-east of Silverton, Animas district, and located in July, 1882; owner Dr. T. P. Plantz, Silverton; vein a fissure five feet wide, containing galena and iron pyrites; developed by a twenty-foot open cut and tunnel, ten feet of which is under cover.

**Nigger.**—300x1500 feet; situated on the east side of Picayune Gulch, two and one-half miles south-west of Animas Forks, Eureka district, and located in April, 1883; owner Henry Ludwig, Animas Forks; vein a fissure from five to seven feet wide, pay streak eighteen inches, containing galena and

quartz, assaying $20 in gold and from twenty to thirty ounces silver per ton; developed by an open cut, crossing the vein, eighteen feet long, with a fifteen-foot face.

**North Star No. 3.**—(See Bielefeldt Group).

**North Star Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, Jno. N. Goodwin; vice-president, Lewis Crooke—both New York City; general manager, Jno. J. Crooke, Lake City; office 163 Mulberry street, New York City, and Lake City; owns the North Star, 300x1500 feet; situated on the apex of King Solomon Mountain, six miles north-east of Silverton, Animas district, and patented in 1881; vein a fissure eight feet wide, pay streak twenty-four inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and 200 ounces silver per ton; developed by three levels aggregating 600 feet in length; output 400 tons; and Royal Tiger, 300x1500 feet; situated on Green Mountain; vein a fissure varying in width, and containing a high-grade ore in a quartz gangue; developed by a tunnel cutting the vein at great depth.

**North Star, on Sultan, Mining Company (The).**—Incorporated under the laws of Colorado, April 4, 1881; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, L. J. Atwood, Waterbury, Conn.; vice-president, W. R. Walkley, Brooklyn, N. Y.; secretary and treasurer, James Irvine, Lima, O.; general manager, O. P. Posey; superintendent, J. R. Lattin—both Silverton; offices 206 Broadway, New York City, and Silverton; owns North Star No. 1, 300x1500 feet; situated on the north slope of Sultan Mountain, one and one-quarter miles south of Silverton, Animas district; located in 1877, and patented in 1881; vein a fissure seven feet wide, pay streak from ten to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty-seven per cent lead, fifty-four ounces silver, and one-fifth ounce gold per ton; developed by four levels, 200, 700, 800, and 300 feet long, with connecting shafts and winzes aggregating 430 feet, 500 feet of drifting, and considerable stoping; daily shipments twelve tons; output over 1,000 tons.

**Nova Zembla.**—300x1500 feet; situated on the west slope of Kendall Mountain, one mile east of Silverton, Animas district; located in October, 1879; owners Elmer King, Samuel Dobyns, and D. R. Davis, all Silverton; vein a fissure seven feet wide, pay streak six inches, containing galena and quartz, assaying forty per cent lead and forty ounces silver per ton; developed by a drift fifty-five feet long.

**Nye.**—(See H. D. Nye and Bonanza.)

**O. K.**—300x1500 feet; situated on west slope of Green Mountain, four miles east of south from Howardsville, Animas district; located in May, 1876; owner George A. Castle, Silverton; vein a fissure seven feet wide, pay streak ten inches, containing gray and yellow copper and some sulphurets in quartz, milling, when sorted, from 50 to 200 ounces silver per ton; developments—one twelve-foot-face cut and fifty-five-foot cross-cut.

**Oberto.**—(On the Bonanza vein); owned by H. E. Hoyt, Kalamazoo, Mich.; claim 1500x1300 feet; situated on the east side of Poughkeepsie Gulch, twelve miles north of Silverton, Uncompahgre district; vein a fissure, probably twenty feet wide, with three pay streaks, containing gray copper and galena in a quartz gangue and vein-matter of baryta and quartz, assaying fairly; developments—assessment work.



**Oden.**—300x1500 feet; situated on north slope of Sultan Mountain, one mile south of Silverton, Animas district; located in July, 1880; owner Olof Nelson, Silverton; vein a fissure eight feet wide, pay streak from two to six inches, containing quartz, galena, and gray copper, assaying forty per cent lead and fifty ounces silver; developed by a seventy-five-foot drift and a thirty-five-foot shaft.

**Old Primm.**—300x1500 feet; situated on the north-west slope of Cinnamon Mountain, one mile south-east of Animas Forks, Eureka district; located in July, 1882; owner Henry Ludwig, Animas Forks; vein a fissure from five to seven feet wide, pay streak eighteen inches, containing galena, yellow copper, and some brittle silver, assaying eighty ounces silver per ton, in a quartz gangue; developments—an open cut with an eighteen-foot face and a drift started at end of cut.

**Ouray Mining and Discovery Company.**—(See Lake County); owns the Wilhite, Glenn, and Mann lodes, situated on the south fork of Eureka Gulch, two miles from Eureka; the Hildebrand, Knickerbocker, Underwood, A. D. Searl, Atchison, Lee, and O. C. Day (the four last adjoining claims on the same vein); situated on the north fork of Eureka Gulch, two miles from Eureka; 300x1500 feet each; located in July and August, 1879; veins all fissures, varying in width from 5 to over 100 feet, some of them containing a number of pay streaks of galena, gray copper, antimony, black sulphurets, chlorides, bismuth, and bromides, assaying from 50 to 1,000 ounces silver per ton; developments—mainly assessment work, and one cross-cut, designed to cut at great depth the vein on which the A. D. Searl, Atchison, Lee, and O. C. Day are located.

**Opera-house.**—300x1500 feet; situated in the Arastra Basin, on the north-east slope of Round Mountain, four miles east of Silverton, Animas district; located in 1878; owners D. W. Beiger, Silverton, and L. W. Liscomb, Rico; vein a fissure twenty-five feet wide, pay streak fifteen inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and forty-two ounces silver per ton, and the vein, for a width of four feet, carries pockets of mineral; developed by two open cuts with ten and twelve foot faces, and one open cut and tunnel thirty-four feet long, ten feet of which is under cover.

**Oriental Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1880; capital stock $1,000,000, in 10,000 shares of $100 each, non-assessable; president, Ezra R. Rust; vice-president, James Jerome; secretary, G. M. Stark; treasurer, J. K. Stevens—all Saginaw, Mich.; general manager, Jno. L. Hall, Silverton; offices Saginaw, Mich., and Silverton; owns four parallel claims, 300x1500 feet each, viz.: Ezra R. vein a fissure from two to four feet wide, pay streak eighteen inches, containing galena in a quartz gangue, milling, when sorted, thirty-five per cent lead, sixty ounces silver, and one ounce gold per ton; Little Belle vein two and one-half feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, thirty-five per cent lead and seventy ounces silver per ton; Peacock vein three feet wide, containing quartz and galena, milling, when sorted, from fifteen to twenty ounces silver per ton; and ——— vein from eight to ten inches wide, milling from $15 to $20 per ton; situated on the east slope of Hazleton Mountain, three and one-half miles north-east of Silverton, Animas district; located in 1877, and the first three patented; developed by one tunnel 840 feet long, designed to cut all the above veins, and cutting ——— at a depth of seventy-five feet, on which there is five feet of drifting; and the Ezra R. 148 feet deep, on which there is ninety feet of drifting, an air-shaft ninety feet deep, connecting with the surface, and two drifts twenty and fifteen feet long on the Little Belle and Peacock; output 100 tons; and owns two mill sites, of five acres each, adjoining the lode claims; located and patented at the same time.

**Orphan Child.**—300x1500 feet; situated in Stony Gulch, two and one-half miles south-east of Howardsville, Animas district; located in July, 1876; owners Frank Wetzel, Silverton, H. S. Farrar, Keokuk, Ia., John Wolfinger, Philadelphia, Pa., and Fisher Bros., Illinois; vein a fissure four feet wide, traceable on the surface for 750 feet, containing quartz and galena, milling, when sorted, twenty-five ounces silver per ton; developed by an open cut and a drift twenty-two feet long, ten feet of which is under cover.

**Pacific.**—300x1500 feet; situated on the west slope of Mineral Point Mountain, at Mineral Point, Uncompahgre district; vein a fissure, six feet wide at the outcrop, pay streak fifteen inches, containing gray copper in a quartz gangue, assaying sixty-five ounces silver per ton; developments—assessment work.

**Pacific.**—(See Treasure Mountain Mining and Milling Company.

**Palmetto.**—(On Polar Star vein); 300x1500 feet; situated on the west slope of Engineer Mountain, about three and one-half miles from Rose's Cabin, Uncompahgre district; vein a fissure, from four to five feet wide, pay streak from ten to thirty inches, containing copper arseniates and silver sulphides in a quartz gangue, milling, when sorted, from 50 to 250 ounces silver per ton; developments and improvements considerable.

**Palmyra Mining and Milling Company.**—(Of Chicago); owns the Palmyra and Palmyra Extension, two adjoining claims on the same vein, 300x1500 feet each; situated at Mineral Point; vein a fissure, varying in width, containing galena and gray copper, with some brittle and ruby silver, and gold, in a quartz gangue, milling, when sorted, from 50 to 100 ounces silver and some gold per ton; developments—one shaft 120 feet deep, with some other workings; improvements—hoisting machinery, buildings, etc.

**Pan Handle.**—300x1500 feet; situated in Mineral Gulch, adjoining Red Mountain City on the north-west, Red Mountain district; located in March, 1883; owners H. B. Pratt and Thos. Donnegan, both Red Mountain City, and J. W. Heck, Silverton; vein a fissure four feet wide, pay streak fifteen inches, containing quartz, galena, iron pyrites, and gray copper, assaying $40 per ton, in gold, silver, and copper; developments—one ten-foot shaft.

**Paradise Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in October, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Fred. C. Sherwin; vice-president, H. G. Heffron; secretary, W. E. Earl; treasurer, H. O. Montague; general manager, C. J. Marsh—all Silverton; office Silverton; owns the Paradise Group, eleven claims, 300x1500 feet each, situated on the south slope of Lookout Mountain, six and one-half miles north of west from Silverton, Red Mountain district, viz.: Clipper, located in 1878; vein five and one-half feet wide, pay streak from six to fourteen inches, and averaging eight inches, containing galena and gray copper, assaying from ten to fifteen per cent copper, forty-three per cent lead, 115 ounces silver, and one-eighth ounce gold per ton, in a quartz gangue; developed by an eighty-foot drift; San Antonio, located in 1878; vein three feet wide, pay streak twelve inches, containing galena, assaying eighty per cent lead and 120 ounces silver per ton, in a quartz gangue; developed by two drifts 260 and 100 feet long, with some buildings; Little Carrie, located in 1881; vein three feet wide, pay streak three inches, containing galena and gray copper, assaying from ten to fifteen per cent copper, forty-three per cent lead, 115 ounces silver, and one-eighth ounce gold per ton, in a quartz gangue; developed by a sixty-foot drift on the vein; Peruvian, located in 1881; vein twenty-two inches wide, pay streak two inches, containing galena, assaying fifty per cent lead and sixty ounces silver per ton, in a quartz gangue;



developed by one twenty-five-foot-face cut; Little Nora, located in 1881 (extension of San Antonio, with same characteristics); developments—one twenty-five-foot-face cut; Artie, located in 1881; vein eighteen inches wide, pay streak three inches, containing galena, assaying thirty per cent lead and sixty-five ounces silver per ton, in a quartz gangue; developed by a twenty-five-foot-face cut; Barton, located in 1881 (extension of Clipper, with same characteristics); developed by a twenty-five-foot-face cut; Little Hope, located in 1881; vein five feet wide, pay streak four inches, containing galena, assaying thirty-four per cent lead and sixty ounces silver per ton, in a quartz gangue; developed by a twenty-five-foot-face cut; Great Hope, located in 1881 (extension of Little Hope, with same characteristics); developed by a twenty-five-foot-face cut; Edward Everett, located in 1881; vein two feet wide, pay streak three inches, of same ore as Clipper; developed by a twenty-five-foot-face cut; Pishawa, located in 1881; vein twelve feet wide, pay streak ten inches, containing galena, assaying fifty-five per cent lead and 174 ounces silver per ton, in a quartz gangue; developed by a twenty-five-foot-face cut; there is also a tunnel forty-five feet long started on the Little Carrie, designed for the development of all this property, at the mouth of which there is an ore-house, shop, boarding-house, etc.; veins all fissures; output 300 tons.

**Parker City and Mercury.**—Two claims, 300x1500 feet each; situated in Boulder Gulch, four miles north of Silverton, Animas district; located in 1875, and in process of patent; owners J. L. Day, Silverton, and Finley Torrens, Pittsburgh; veins both fissures, seven and six feet wide, pay streak twenty-four and twelve inches, containing galena, brittle silver, and considerable bismuth in quartz, milling, when sorted, forty per cent lead and 100 ounces silver per ton; developed by a tunnel 262 feet long, cutting the vein 200 feet deep, on which there is seventy-five feet of drifting on the former, and a drift fifty feet long on the latter.

**Path-finder.**—300x1500 feet; situated on the north-east slope of Hazleton Mountain, two and a half miles north-east of Silverton, Animas district; located in 1874, and in process of patent; owners J. W. Collins and J. H. Reed, both Silverton; Geo. S. Smith, Denver, and M. D. Rapp and Louis Gathmann, both Chicago; vein a fissure, four feet wide, the mineral being galena, gray copper and chlorides appearing in pockets, streaks, and chimneys, and milling, when sorted, 100 ounces silver per ton; developed by two shafts twenty-five and sixty feet deep, one cross-cut twenty-five feet long, and a thirty-foot drift from end of cross-cut.

**Paul Jones and Albatross Tunnel Sites.**—3000x6 feet each; situated on the north slope of Lookout Mountain, six and a half miles north of west from Silverton, Red Mountain district; located in 1882; on which tunnels are now driven forty and thirty feet long, respectively; the former for the development of five claims, all containing fissure veins as follows: Lycurgus five feet wide, pay streak six inches of galena and quartz, assaying thirty-five ounces silver per ton; developments—one twenty-five-foot-face cut; Hidden Gem two feet wide of mineralized quartz; developments—one twenty-foot-face cut; Paul Jones two feet wide of mineralized quartz; developments—one twenty-foot-face cut; and Albatross No. 2 thirty inches wide of mineralized quartz, assaying fifty ounces silver per ton; and the latter for the development of five claims, 300x1500 feet each, all containing fissure veins as follows: Miner's Dream two feet wide of mineralized quartz; developments—one twenty-foot-face cut; Albatross four feet wide, pay streak twenty-four inches, assaying thirty-five ounces silver per ton; developments—one open cut and tunnel twenty-five feet long, ten feet of which is under cover; Nunpa Walla two feet wide of mineralized quartz; developments—one twenty-foot-face cut; and Silver Cloud vein two and a half feet wide of mineralized quartz; developments—

one twenty-foot-face cut; and two other claims within the same surface ground; all located in 1879; owners J. D. Rollins, Silverton, and E. B. Rollins, New York City.

**Pay-well.**—300x150 feet; situated at the mouth of Arastra Gulch, two miles north-east of Silverton, Animas district, and located in August, 1881; owners W. Leonard, Wm. H. Dean, Frank Franklin, and Wm. Wheeler, all Silverton; vein a fissure, four feet wide, pay streak five inches, containing galena, iron pyrites, and quartz, assaying twenty-five per cent lead and seventy ounces silver per ton; developed by an open cut and tunnel thirty feet long, eight feet of which is under cover.

**Peerless Group.**—Five claims, 300x1500 feet each; situated on the east slope of Bear Mountain, four miles south-west of Silverton, Animas district; located September, 1881; veins all fissures, as follows: Peerless eight feet wide, containing four feet of galena interspersed through a decomposed porphyry gangue, assaying seventy per cent lead and thirty-two ounces silver per ton; in the Terrible three and a half feet wide, pay streak eight inches, containing galena and quartz, assaying forty-five per cent lead and twenty-five ounces silver per ton; in the Zufii four and a half feet wide of mineralized quartz; in the Bear Creek (extension of Zufii) same characteristics, and Good-enough (extension of Peerless) same characteristics; the first three claims lying parallel, the veins in which will be cut by a cross-cut tunnel now in progress; the additional developments consisting mainly of assessment work; owners G. L., E. V., and L. F. Hollingsworth and Geo. Jewett, all Silverton.

**Penn Group.**—Five claims, 300x1500 feet each, viz.: Penn, Center, Lulu, Ingersoll, and Montgomery; situated on the south slope of Lookout Mountain, two miles south-west of Chattanooga, Animas district; located in July, 1882, and March, 1883; owners Frank W. Ingersoll, J. W. Heck, and J. H. Alderson, all Silverton; veins all fissures from three to four feet in width; pay streak in the Center from twenty-four to thirty inches wide, containing galena and sulphurets in quartz, assaying twenty per cent lead and fifty-four ounces silver per ton; and in Montgomery from twenty-four to thirty inches wide, containing galena and sulphurets in quartz, assaying forty per cent lead and thirty-four ounces silver per ton; developed by three shafts from ten to twenty feet deep each, and two open cuts with eighteen and twenty-five foot faces.

**Pennsylvania.**—300x1500 feet; situated on the south-west slope of Pigeon Peak, twelve and one-half miles south of Silverton, Animas district; located in January, 1883; owners C. E. Dow and M. Feeney, both Durango; vein a fissure twelve feet wide, pay streak from four to six inches, containing arsenical ruby silver and quartz, assaying from 90 to 100 ounces silver per ton; developed by one ten-foot-face cut.

**Pinto.**—(See Feigel Group.)

**Pittsburgh Silver Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1880; capital stock $100,000, in 10,000 shares of $10 each; president, D. Macferron, Alleghany City, Pa.; vice-president, William McCance, Pittsburgh; secretary, H. R. McClelland, Taylor City, Colo.; treasurer, R. L. McCulley, Pittsburgh, Pa.; general manager, C. Reiter, Taylor City, Colo.; office Taylor City; owns the Pittsburgh and Alleghany lodes, 1500x300 feet each; situated on Lake Mountain, Eureka district, sixteen miles from Silverton; located in 1879; veins both fissures from two to five feet wide, containing galena and quartz, assaying 100 ounces silver per ton; developed by a tunnel twenty feet long and a shaft twenty-five feet deep.



**Plute.**—300x1500 feet; situated in Boulder Gulch, two and one-half miles north of Silverton, Animas district; located in 1875, and in process of patent; owner J. L. Day, Silverton; vein a fissure seven feet wide, pay streak thirty inches, containing galena, copper and silver sulphurets, in a quartz gangue, milling, when sorted, forty per cent lead, thirty per cent copper, and seventy-five ounces silver per ton; developed by a drift sixty-five feet long, and a shaft twenty feet deep, in the last of which appears a one-inch streak of telluride ore, assaying 500 ounces silver and ten ounces gold per ton.

**Pleasure Ridge.**—Owners Fred. J. Candee, Eureka, and A. W. Smith, Silverton; claim 300x1500 feet; situated on the east slope of Eureka Mountain, one mile north of Eureka, Eureka district, and located in 1882; vein a fissure ten feet wide, pay streak twelve inches, containing galena and quartz, assaying thirty per cent lead and twenty ounces silver per ton; developed by two open cuts with ten-foot faces each and a tunnel ten feet long.

**Plutus.**—300x1500 feet; situated on the south-west slope of Boulder Mountain, two and one-half miles north of Silverton, Animas district, and located in July, 1882; owners Wm. Sullivan and John Carver, both Silverton; vein a fissure four feet wide, pay streak from six to eight inches, containing arsenical copper in a quartz gangue, milling, when sorted, from ten to fifteen per cent copper and twenty ounces silver per ton; developed by one shaft twenty feet deep.

**Plymouth Rock.**—Owned by P. H. O'Brien and J. N. Anderson, both Silverton; claim 300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile east of Chattanooga, Red Mountain district, and located in July, 1882; vein a fissure four feet wide, containing quartz, galena, and gray and yellow copper, assaying thirty-five per cent lead and thirty ounces silver per ton; developed by a twenty-foot open cut and tunnel, five feet of which are under cover.

**Polar Star.**—300x1500 feet; situated in East Cascade Basin, thirteen miles south-west of Silverton, Animas district, and located in July, 1882; owners S. H. Burghardt, Rico, and D. A. Cook, Ottawa, Ill.; vein a fissure fifty inches wide, pay streak six inches, containing spar, with brittle silver, assaying 175 ounces silver per ton; developed by one ten-foot-face cut and one six-foot shaft.

**Polar Star.**—300x1500 feet; situated on top of Engineer Mountain, three miles west of Rose's Cabin, Uncompahgre district, and patented in 1881; owners John J. Crooke and Henry A. Wood, both Lake City; vein a fissure five feet wide, pay streak from twelve to thirty-six inches, containing silver sulphurets, copper arseniates, and silver sulphides, in a quartz gangue, milling, when sorted, 400 ounces silver per ton; developed by two levels on the east face 220 feet long each, from which were taken during 1881 and 1882 1,100 pounds of silver, and one drift 600 feet long on west side, running through the cap-rock, and now in mineral.

**Pontoon Group.**—Owned by J. L. Hill, New York City, and others; group comprises four claims, viz., Pontoon, Emma, Honeysuckle, and Merrimac, 300x1500 feet each; situated in Burns' Gulch, two miles from Eureka, Eureka district; veins all fissures, in the Pontoon from three to five feet wide, containing quartz and pyrites, pay streak from five to ten inches, composed of gray copper, with some brittle silver, assaying from 50 to 150 ounces silver per ton, in a quartz gangue; developed by a sixty-foot drift; in the Emma the vein and mineral are similar to those of the Pontoon; developed by one forty-foot drift; and in the other claims the vein-contents show up well enough with only assessment work done.

**Poor Man and Poor Woman.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on Cement Creek, nine miles north of Silverton, Eureka district, and located in February, 1883; owners E. Bielefeldt and John Stadelman, both Silverton; vein a fissure three and one-half feet wide, pay streak eighteen inches, containing galena and quartz, assaying twenty-three per cent lead and fifty ounces silver per ton; developed by two cuts with ten-foot faces each.

**Porcupine.**—300x1500 feet; situated on Cement Creek, four miles north of Silverton, Animas district, and patented in April, 1883; owners Ben. Harwood, Frank T. Rodd, and —— Walker, all Silverton; vein a fissure seven and one-half feet wide, pay streak eighteen inches, containing galena and copper in a quartz gangue, milling, when sorted, forty-five per cent lead and forty ounces silver per ton; developed by two tunnels 175 and 70 feet long, respectively, and one shaft sixty feet deep; output 100 tons.

**Potomac Silver Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $3,000,000, in 200,000 shares of $15 each, non-assessable; president, H. R. Nash; secretary and treasurer, W. H. Hibbard—both New York City; general manager, F. W. Sitterly, Silverton; offices 31 Broadway, New York City, and Silverton, Colo.; owns Potomac, Cremorne, and Gen. Garfield, three adjoining claims on the same vein, 300 feet wide each, and 1500, 1430, and 792 feet long, respectively; situated on the Giant Basin slope of King Solomon Mountain, four miles east of Silverton, Animas district; located in 1875, 1880, and 1881, and patented; vein a fissure thirty feet wide, with three pay streaks aggregating sixty inches, containing galena and some gray copper in a quartz gangue, milling, when sorted, sixty per cent lead and forty ounces silver per ton; developed by one level 100 feet long on the Potomac and $500 worth of work on each of the others; output 100 tons.

**Powhattan.**—300x1500 feet; situated on the west slope of Red Mountain, one-third mile east of Chattanooga, Red Mountain district, and located in March, 1883; owners Peter Burns and Jno. Kilmartin, both Chattanooga, James Phelan, Silverton, and M. T. Fitzpatrick; vein a fissure five feet wide, containing decomposed porphyry quartz and heavy spar, carrying galena, gray copper, and iron pyrites, assaying $28 per ton at depth of ten feet; developed by one twelve-foot-face cut and one ten-foot tunnel from end of cut.

**Preston Group.**—Three claims, 300x1500 feet each; situated on the north slope of Sultan Mountain, one mile south of Silverton, Animas district; owners P. J. Holmgrain (James Murdock and M. Breen are owners in the Preston); veins all fissures, as follows: in the Preston (located in June, 1880) ten feet wide, pay streak ten inches, containing quartz, galena, and gray copper, assaying thirty per cent lead and seventy-five ounces silver per ton; developed by a fifty-foot shaft; in the Wild Rover (located in July, 1881) six feet wide, pay streak five inches, containing gray copper and lead carbonates, assaying 100 ounces silver per ton; developed by a twenty-five-foot level; and in the Mermaid (located in July, 1880) five feet wide, pay streak eight inches, containing galena and gray copper, assaying 150 ounces silver per ton; developed by a thirty-foot level.

**Pride of Eureka.**—300x1500 feet; situated on north fork of Eureka Gulch, one and one-half miles from Eureka, Eureka district, and patented in May, 1883; owners B. O'Driscoll and James Morrison, both Silverton, and Henry Miller, Eureka; vein a fissure five feet wide, with three pay streaks, containing galena, iron and copper pyrites, and aggregating twenty inches in width, milling, when sorted, forty ounces silver per ton; developments—one fifteen-foot shaft and one open cut, and drift twenty-three feet long, eight feet of which is under cover.



**Pride of Syracuse.**—300x1500 feet; situated on top of Engineer Mountain, three miles west of Rose's Cabin, Uncompahgre district, and patented in 1881; owners John J. Crooke and Henry A. Wood, both Lake City; vein a fissure eight feet wide, pay streak thirty-six inches, containing galena, gray copper, and sulphide of bismuth, in a quartz gangue, milling, when sorted, eighty ounces silver and from three-fourths to one ounce gold per ton; developed by a sixty-foot level and several openings on the vein.

**Pride of the West.**—300x1500 feet; situated on the Cunningham Gulch slope of Green Mountain, six miles from Silverton, Animas district; located in 1871, and patented; vein a fissure from fifty to seventy-five feet wide, pay streak from one to ten feet, containing galena and gray copper in a quartz gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developed by one shaft 100 feet deep, with considerable drifts, tunnels, and other workings, showing large ore-reserves.

**Prince Albert.**—300x1500 feet; situated on the west slope of Cinnamon Mountain, three-quarters of a mile south-east of Animas Forks, Eureka district; located in January, 1882; owners Henry Ludwig and Albert Dyes, both Animas Forks; vein a fissure twelve feet wide, pay streak five feet, containing quartz, with galena and copper and iron pyrites, assaying sixty ounces silver per ton; developments—one open cut and tunnel thirty-three feet long, fifteen feet of which is under cover.

**Prince of Wales.**—(See Midnight.)

**Prize Mining Company (The).**—Incorporated under the laws of Colorado in June, 1881; capital stock $900,000, in 90,000 shares of $10 each, non-assessable; chairman of the board of directors, —— Price, London, England; manager and superintendent, T. P. Plantz, Silverton; offices at Junior Carlton Club, London, and Silverton; owns seven claims, 300x1500 feet each, viz.: Prize (located in 1875), vein a fissure from one to four feet wide, and averaging twenty-four inches in width, containing quartz, galena, and copper, milling, when sorted, thirty per cent copper and sixty per cent silver per ton; developed by one level 130 feet long; General Garfield (located in June, 1880), vein nine feet wide, pay streak fourteen inches, containing pockets of a compound telluride ore in a quartz gangue, milling, when sorted, 18 ounces gold and 400 ounces silver per ton; developed by a sixty-foot level; Ogle (located in June, 1877), vein fourteen inches wide, containing iron pyrites and black iron in quartz; developed by a forty-foot level; Eclipse (located in June, 1877), vein from twelve to fourteen inches wide, containing galena in quartz; developed by a twenty-five-foot level; Silver Spring (located in May, 1877), vein eighteen inches wide, containing galena and quartz, milling, when sorted, twenty-eight ounces silver per ton; developed by a forty-five-foot level and a fifteen-foot cross-cut; Spruce (located in June, 1878), vein twenty inches wide, containing galena in quartz, milling, when sorted, three ounces gold and thirty-three ounces silver per ton; developed by a fifty-foot level; Monroe (located in April, 1877), vein five feet wide, containing decomposed porphyry, milling, when sorted, five ounces silver per ton; developed by a twenty-five-foot level; all situated in Boulder Gulch, two miles north-east of Silverton, Animas district.

**Promontory Mining Company.**—Owns five claims, viz.: Promontary, Dexter, Lookout, Vulture, and another, 300x1500 feet each; situated on the Burns' Gulch slope of Jones Mountain, two miles from Eureka, Eureka district; veins all fissures from one to ten feet wide, containing a quartz vein-matter and gangue, and galena, gray copper, and some brittle and wire silver, assaying from 50 to 250 ounces silver per ton; developments considerable

**Puzzle.**—300x1500 feet; situated on the north-east slope of Sultan Mountain, one mile south of Silverton, Animas district, and located in August, 1882; owners Thos. Kellow, Joseph Uren, and James Bailey, all Silverton; vein a fissure three feet wide, pay streak from one to six inches, containing quartz, galena, and gray copper, assaying twenty per cent lead and forty ounces silver per ton; developed by a drift sixty feet long.

**Queen Anne.**—(Formerly Alpha); 300x1500 feet; situated at head of Cement Creek, ten miles north of Silverton, Eureka district, and located in January, 1883; owners J. V. Kilbourn, Silverton, and Michael White, Del Norte; vein a fissure forty feet wide, pay streak from three to five feet, containing heavy galena in a quartz gangue, milling, when sorted, fifty per cent lead and twenty-nine ounces silver per ton; and three other pay streaks from three to twenty inches in width, containing gray copper, brittle silver, and sulphurets, milling, when sorted, from 300 to 800 ounces silver per ton; developed by three shafts ten feet deep each and one thirty-foot cut with twelve-foot face; output ten tons.

**Queen of Boulder and Louis Gathmann.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the east slope of Boulder Mountain, two and one-half miles north of Silverton, Animas district, and located in 1875 and 1879; owners J. W. Collins and J. H. Reed, both Silverton; vein a fissure eight feet wide, pay streak twenty-four inches, containing chlorides and sulphurets of copper in a quartz gangue, milling, when sorted, twenty-five per cent lead and twenty-five ounces silver per ton; developed by two levels 115 and 170 feet long and one twenty-foot shaft.

**Rarus Consolidated Mining Company (The).**—Incorporated under the laws of Colorado; superintendent, T. C. Wilson; owns seven claims, 300x1500 feet each, viz.: Ben. Bolt and Rarus, patented, and Iroquois, Imogene, C. G., Grand View, and Hattie; situated on the Animas slope of Eureka Mountain, Eureka district; veins all fissures from five to thirty feet wide, containing a fair material, assaying in the Rarus fifty per cent lead and twenty-five ounces silver per ton, in the Iroquois sixty per cent lead, in the Grand View sixty ounces silver and $18 in gold, and in the Hattie twenty-five ounces silver and $37 in gold; developments—mainly assessment work.

**Red Cliff Mining Company.**—President, C. K. Holliday; secretary, Jno. Guthrie; manager, C. Monjeau—all Topeka, Kas.; superintendent, J. C. Holme, Eureka; owns two groups, viz.: Herald, six claims, situated on the Eureka Gulch slope of Silver Mountain, and the Astor, five claims, three adjoining each other on the same vein, and two crossing on the Eureka Gulch slope of Tower Mountain, Eureka district; veins all well defined fissures, containing a fair material; developed by tunnels designed to cut the best leads from 500 to 1,500 feet in depth.

**Red Cloud.**—(See Mineral Mountain Mining Company.)

**Red Gulch Mining and Milling Company.**—Owns the Atlantic; situated in Grouse Gulch, Eureka district; vein a fissure varying in width, and containing a fair material, with considerable developments.

**Red Mountain.**—300x1500 feet; situated on the west side of Mineral Gulch, three-fourths mile north of Chattanooga, Red Mountain district; located in January, 1883; owners Wm. Evick and E. H. Minard, both Chattanooga; ore body probably a deposit, a fifteen-foot-face cut and a fifteen-foot shaft from end of cut showing more or less galena and arsenical copper.

**Red Rogers.**—300x1500 feet; situated at the Head of Poughkeepsie Gulch, ten and one-half miles north of Silverton, Uncompahgre district, and



patented in 1879; owner H. A. W. Tabor, Denver; vein a fissure, from sixteen to eighteen feet in width, pay streak from thirty to thirty-six inches, containing pockets of sulphurets and brittle silver in a heavy-spar gangue, milling, when sorted, from 100 to 150 ounces silver per ton; developed by one shaft 110 feet deep, and a drift 400 feet long, connecting with shaft, and some other workings; output forty tons.

**Rice.**—(See C. L. Rice.)

**Rice Group.**—Six claims, 300x1500 feet each; situated on the west slope of Middle Mountain, one-fourth mile north-east of Eureka, Eureka district, and located in 1877; owner C. L. Rice, Eureka; veins all fissures, in the Michael Charles five feet wide, pay streak four inches, containing galena and quartz, assaying twenty-eight ounces silver per ton, and developed by a twenty-foot tunnel; in the Melissa Jane twenty-four inches wide, pay streak three inches of galena and quartz, assaying sixty ounces silver and $18 gold per ton; developments—a ten-foot tunnel; in the Ella Loy six feet wide of quartz, showing galena; developments—one sixteen-foot open cut and tunnel, six feet of which is under cover; in the Flora Frederica twenty-two feet wide of quartz, with galena and iron pyrites; developments—a forty-two-foot tunnel (one-fourth of this claim is owned by F. D. Loy, Eureka); in the Salamander eight feet wide of quartz, with galena and iron pyrites; developments—a forty-five-foot tunnel; and in the Rice three feet wide of mineralized quartz.

**Richmond.**—300x1500 feet; situated on the west slope of Red Mountain, Red Mountain district, and located in March, 1883; owners John Kilmartin and Peter Burns, both Chattanooga, James Phelan, Silverton, and M. T. Fitzgerald; vein a fissure five feet wide, containing quartz, native copper, and iron pyrites; developments—one ten-foot-face cut.

**Rip Van Winkle and Phœnix.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Niagara Gulch, one and one-half miles east of Eureka, Eureka district, and located in 1877 and 1880, and the former in process of patent; owners C. Wuertz and Adam Ressler, both Cleveland, Mr. Wuertz owning the Phœnix entirely; vein a fissure from eight to twelve feet wide, containing quartz, with galena, and gray and yellow copper, assaying twenty per cent lead and twenty-eight ounces silver per ton; developments—a sixty-foot tunnel and a twenty-foot open cut on the former, and an open cut and tunnel twenty-two feet long, seven feet of which is under cover, on the latter.

**Robert Blum and International.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the south slope of Green Mountain, seven miles north-east of Silverton, Animas district; located in 1876, and in process of patent; owners E. Bielefeldt and Peter Meyer, both Silverton, and Chas. C. Priester, Davenport, Iowa; vein a fissure from eight to ten feet wide, with two pay streaks, one on the foot-wall eighteen inches wide, and one on the hanging-wall from twenty-four to thirty inches wide, containing galena and gray copper in a quartz gangue, milling, when sorted, seventy-five per cent lead and seventy ounces silver per ton; developments—three open cuts with ten-foot faces each, and a tunnel 175 feet long, cutting the vein at a depth of 170 feet; output twenty-five tons.

**Robert Burns.**—300x1500 feet; situated on the south-east slope of Kendall Mountain, five miles east of Silverton, Animas district, and located in July, 1882; owners John Kilmartin and Peter Burns, both Chattanooga; vein a fissure five feet wide, pay streak thirty inches, containing gold-bearing quartz, assaying $25 per ton; developed by one ten-foot-face cut and one twenty-five-foot drift from end of cut.

**Rochester, Cortland, and Progressive.**—Three claims, 300x1500 feet each; situated on the south slope of Tower Mountain, one-fourth mile north of Howardsville, Animas district; patented in 1882; owner James M. Hopkins, Louisville, Ky.; veins all fissures, in Rochester ten feet wide, pay streak twenty-four inches, containing quartz, galena, and copper pyrites, assaying twenty ounces silver per ton; developed by a tunnel thirty feet long and a shaft fifteen feet deep; in the Cortland ten feet wide, pay streak twenty-four inches of quartz, galena, and copper pyrites, assaying twenty ounces silver per ton; developed by a tunnel twenty-five feet long; in the Progressive ten feet wide, pay streak twenty-four inches of quartz, galena, and copper pyrites, assaying twenty ounces silver per ton; developed by a fifty-five-foot tunnel on the vein.

**Rosalie.**—300x1500 feet; situated on the north-east slope of Boulder Mountain, three miles north of Silverton, Animas district; located in July, 1882; owners Sam'l Dobyns, R. J. Bruns, and Wesley Tinker, all Silverton; vein a fissure, ten feet wide, pay streak twenty-four inches, containing galena and quartz, assaying fifty per cent lead and twenty-five ounces silver per ton; developed by a tunnel 160 feet long, cutting the vein 100 feet deep and a cut with ten-foot face.

**Round Mountain.**—300x1500 feet; situated on the north slope of Round Mountain, four miles north-east of Silverton, Animas district; located in 1873, and in process of patent; owners Dempsey Reese, Silverton, and estate of A. B. Stevens, Chicago; Dempsey Reese, administrator; vein a fissure, fifty feet wide, with several pay streaks aggregating six feet in width, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and forty ounces silver per ton; developed by a cut thirty feet long with a twenty-five-foot face and a shaft twenty feet deep.

**Round-up.**—300x1500 feet; situated on the Cascade slope of Mineral Mountain Peak, four and one-half miles east of Trout Lake, Animas district; located in August, 1879; owner David Hemdel, Lake City, and Canute Lee, Trout Lake; vein a fissure, thirty inches wide, pay streak from two to four inches, containing oxide of copper and gray copper and galena, assaying thirty-five per cent lead and 175 ounces silver per ton, in a quartz gangue; developed by two open cuts with ten-foot-faces each.

**Royal Charter.**—300x1500 feet; situated on the west slope of King Solomon Mountain, one-half mile east of Howardsville, Animas district; located in 1877, and in process of patent; owners T. M. Tripp and Chas. Forsyth, both Howardsville, and Oliver Matthews, Silverton; vein a fissure, four feet wide, pay streak from five to thirty inches and averaging fourteen inches, containing galena, assaying forty-five per cent lead and forty ounces silver per ton, in a quartz gangue; developed by one seventy-five-foot shaft and one drift forty feet long, and two open cuts with ten-foot-faces each.

**Ruby Queen.**—(An extension of the Palmetto); 300x75 feet; situated on the west slope of Engineer Mountain, Uncompahgre district; vein a fissure, possessing similar characteristics to the Palmetto vein, through the workings of which it is developed.

**Sal. Custer.**—300x1500 feet; situated on the west slope of Kendall Mountain, one and one-half miles west of Silverton, Animas district; located in 1876; owner E. T. Sweet, Silverton; vein a fissure, six feet wide, pay streak ten inches, containing galena in quartz, milling, when sorted, thirty per cent lead, one-half ounce gold, and thirty ounces silver per ton; developments—one forty-foot drift.

**Salem.**—(See Boulder Mountain Mining Company.)



**Salem and Senate.**—Two claims, 300x1500 feet each; situated on the west slope of Red Mountain, one mile south of Red Mountain Town, Red Mountain district; located in July, 1881, and the former patented and the latter in process; owners O. P. Posey, J. W. Wingate, E. W. Hodges, Mort. and Chas. Stockman, Geo. U. Ingersoll, and Oliver Matthews, all Silverton; ore-body probably a deposit, one shaft forty feet deep on the Salem showing arsenical copper in a quartz gangue, on all sides, milling, when sorted, twenty-eight per cent copper, one ounce gold, and fifteen ounces silver per ton.

**Sallie Lewis and Little Maggie.**—Two parallel claims, 300x1500 feet each; situated in Prospect Basin, six miles north of Silverton, Red Mountain district; located in March, 1883; owner G. W. Lewis, Durango; veins probably fissures four feet wide each, containing quartz, galena, and iron pyrites; developments—one ten-foot-face cut on each claim.

**Sampson and Sampson No. 2.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the south slope of Bonita Mountain, eight and one-half miles north of Silverton, Eureka district; located in 1878 and 1881; owners Henry Promise, Eureka, David McAndrews and Jas. Morrison, both Silverton; vein a fissure, pay streak twenty-four inches, containing pockets of a sulphuret ore in quartz, milling, when sorted, from 75 to 300 ounces silver per ton; developed by one seventy-five-foot drift and two shafts forty and twenty-five feet deep.

**San Antonio.**—300x1500 feet; situated on the south slope of Houghton Mountain, one-fourth mile north-west of Animas Forks, Eureka district; located in January, 1881; owner Henry Ludwig, Animas Forks; vein a fissure seven feet wide, pay streak twenty-four inches, containing galena and copper and iron pyrites, assaying seventy-five ounces silver per ton, in a quartz gangue, and the entire vein is mineralized; developed by 160 feet of drifting on the vein.

**San Violet and Ninian O. Primm.**—Two claims, 300x1500 feet each; situated on the north slope of Cinnamon Mountain, one-half mile south-east of Animas Forks, Eureka district; located in September, 1880; owner Henry Ludwig, Animas Forks (Fred. Averholdt, Animas Forks, is one-fourth owner in the San Violet); vein a fissure from five to seven feet wide, with two pay streaks, one on the foot-wall twelve inches, containing galena and quartz, assaying from thirty to thirty-five per cent lead, twenty-five ounces silver, and some gold per ton, and on the hanging-wall six inches, containing copper pyrites, copper carbonates, and quartz, assaying sixty ounces silver per ton; developments—one thirty-foot open cut and tunnel, twelve feet of which is under cover, on the former, and two open cuts with twelve and twenty foot faces on the latter.

**Saxon.**—300x1500 feet; situated in Poughkeepsie Gulch, near the Alaska mine, eleven miles north of Silverton, Uncompahgre district, and patented in 1879; owner H. A. W. Tabor, Denver; vein a fissure from fifteen to twenty feet wide, pay streak from thirty to thirty-six inches, containing pockets of black sulphurets and antimonial silver in a decomposed gangue, milling, when sorted, from 100 to 2,000 ounces, and probably averaging 500 ounces silver per ton; developed by one shaft sixty feet deep and a drift 380 feet long, connecting with shaft; output fifteen tons.

**Schiller.**—300x1500 feet; situated on the west slope of Camel Mountain, one-fourth mile east of Eureka, Eureka district; located in 1879, and patented in 1883; owners Peter Fassbinder, Durango, and Gottlieb Shied, Silverton; vein a fissure five feet wide, pay streak from fifteen to thirty inches, containing bismuth silver and quartz, assaying $150 per ton; developed by two levels 37 and 110 feet long.

**Scorpion.**—300x1500 feet; situated in Eureka Gulch, one-fourth mile west of Eureka, Eureka district; located in 1874; owned by Peter Mario and others, Howardsville; vein a fissure twenty feet wide, containing quartz, galena, and gray copper, four feet of which mills, when sorted, $96 per ton; developments—a tunnel seventy feet long on vein.

**Seven-Thirty.**—300x1500 feet; situated at the head of Cascade Creek, fifteen miles south-west of Silverton, Animas district; located in August, 1881; owners W. O'Connell, H. Brown, and F. Harmon, all Durango, and H. W. McLaughlin, Ellis Kas.; vein a fissure, three feet wide, pay streak twelve inches, containing quartz, galena, gray copper, and brittle silver, assaying thirty-five ounces silver per ton; developed by one fifteen-foot-face cut.

**Shakespeare Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1882; capital stock $1,000,000, in 40,000 shares of $25 each, non-assessable; president, P. L. McKennie; vice-president, B. C. Keator; secretary, Wm. Clendenin; treasurer, J. S. Leas—all Moline, Ill.; superintendent and agent, Fred. J. Candee, Eureka; offices Moline and Eureka; owns five claims, 300x1500 feet each, viz., Shakespeare and Hard Cash, located in 1878, and Maud S, in 1881; situated on the east slope of Eureka Mountain, one-half mile north of Eureka, Eureka district; veins all fissures, in the Shakespeare seven feet wide, pay streak fifteen inches, containing galena, iron pyrites, and quartz, assaying fifty ounces silver and some gold per ton; developed by a fifteen-foot shaft and a twenty-foot tunnel; in the Hard Cash two outcrops on the surface aggregating twelve feet in thickness, with several pay streaks, aggregating twenty-eight inches, containing iron pyrites, galena, gray copper, and quartz, assaying forty ounces silver and some gold per ton; developed by a twelve-foot-face cut and a cross-cut 125 feet long, cutting vein fifteen feet deep, and designed to cut the two mentioned veins; in the Maud S. five feet wide, pay streak twenty-two inches, containing iron pyrites, gray copper, and quartz, assaying sixty ounces silver per ton; developed by a fifteen-foot-face cut; Bradelbine and Clysdale located in September, 1878, and April, 1879; situated at head of Cement Creek, ten miles north of Silverton, Uncompahgre district, on which development work is being done; the first a fissure, four feet wide, pay streak four inches of gray copper and native silver.

**Shamrock and Killarney.**—Two claims, 300x1500 feet each; situated on the west slope of Red Mountain, adjoining the Congress mine, seven miles north-west of Silverton, Red Mountain district; located in 1882; owners W. J. Grow, Albert Mayers, and C. M. Osman, all Silverton, and C. L. Petherbridge, Durango; ore body probably a deposit, a twenty-foot shaft on each claim showing arsenical copper in the bottom, assaying fifteen per cent copper and fifty ounces silver per ton.

**Seigel.**—300x1500 feet; situated on the west slope of Seigel Mountain, three miles west of Rose's Cabin, Eureka district, and patented in 1881; owners Jno. J. Crooke and Henry A. Wood, both Lake City; vein a fissure, four feet wide, pay streak eighteen inches, containing galena and gray copper in quartz, milling, when sorted, forty-five per cent lead, sixty ounces silver, and some gold per ton; developed by one level fifty feet long.

**Silver Coin Group.**—Six claims, 300x1500 feet each; situated on the east slope of Treasure Mountain, adjoining Animas Forks on the east, Eureka district; owners W. R. Bowman, Silverton, S. W. Raymond, Animas Forks, and J. H. Fessenden, Newton, Mass.; veins all fissures, of the following widths, respectively: ten, four, four, twenty, and twenty feet, in the Silver Coin, Forest Queen, Forest, Argonaut, and Prospero, with pay streaks twenty, fourteen, fourteen, twelve, and seventy-two inches wide, containing galena and gray copper in the first three, and forty-eight inches in each of the two latter is



galena, in a quartz gangue, milling, when sorted, forty-five per cent lead and from thirty to thirty-five ounces silver per ton; twenty-four inches is gold and silver bearing quartz, milling from 100 to 150 ounces silver and $6 in gold per ton; developments—on the Silver Coin, one open cut thirty feet long and two tunnels twenty feet long each; on the Forest Queen, one twenty-five-foot tunnel; on the Forest, one fifty-five-foot tunnel and one twenty-five-foot open cut; on the Prospero and Argonaut, one tunnel 200 feet long, for the development of both claims; and the Lily C. Smith, on which there is a twenty-five-foot open cut and tunnel; all located in June, 1876, except the Forest (in June, 1877), and all in process of patent.

**Silver Coin.**—300x1500 feet; situated in Deadwood Gulch, two miles south-east of Silverton, Animas district; located in June, 1881; owners Wm., John, Matthew, and James Moyle, all Silverton; vein a fissure twelve inches wide, pay streak two inches, containing galena, gray copper, and quartz, assaying 125 ounces silver per ton; developed by a twelve-foot-face cut and a twelve-foot drift from end of cut.

**Silver Bell.**—300x1500 feet; situated on the west slope of Red Mountain, three-fourths mile north of Chattanooga, Red Mountain district; located in February, 1883; owners Wm. H. Emerson and J. P. Odenkirk, both Chattanooga, Jacob Ross, Silverton, and J. C. Bates, Ophir; vein a fissure sixty feet wide, containing ten feet of quartz and galena, assaying ten per cent copper, thirty-five per cent lead, and twenty-five ounces silver per ton; developed by one ten-foot-face cut and one tunnel cutting the vein seventy-five feet deep.

**Silver Crown.**—300x1500 feet; situated on the south side of Mineral Creek, three-fourths mile north-west of Mineral Point, Uncompahgre district; located in October, 1877; owners W. D. Laty, Ouray, and J. A. Gilmore, Rico; vein a fissure, from ten to thirty inches wide, pay streak from five to fifteen inches, containing galena, gray copper, with native silver and silver glance, in a quartz gangue, milling, when sorted, fifty ounces silver per ton; developed by two tunnels twenty-two and forty feet long and one ten-foot open cut.

**Silver Crown Mining Company (The).**—Owns five claims, 300x1500 feet each; situated in Mill Gulch, one and one-fourth miles west of Chattanooga, Red Mountain district, viz., Silver Crown, Wonderful, and three others, adjoining each other on the same vein; vein a fissure eight feet wide, pay streak thirty inches, containing galena, arsenical copper, and quartz, assaying forty-five per cent lead and forty ounces silver per ton; developed by two tunnels 115 and 180 feet long, the former cutting the vein sixty feet deep, and the second designed to cut the vein at a depth of eighty feet, and five open cuts with ten-foot faces each.

**Silver Glance.**—300x1500 feet; situated on the west side of Mineral Gulch, three-fourths of mile north of Chattanooga, Red Mountain district, and located in February, 1883; owners Wm. Applewhite, Jerry Bartl, and E. H. Minard, all Chattanooga; one thirty-five-foot drift, with a five-foot shaft from bottom of drift, showing indications similar to the Silver Ledge.

**Silver Globe Mining Company.**—President, C. K. Holliday; secretary, Jno. Guthrie; manager, C. J. Monjeau—all Topeka, Kas.; superintendent, J. C. Holme, Eureka; owns fourteen lode and placer claims, either patented or in process, five of the former adjoining each other on the same vein, and three others crossing; situated at the head of the south fork of Eureka Gulch, on Silver Mountain, Eureka district; veins all fissures, varying in width, and containing a fair material; developments—one cross-cut 525 feet long, designed to cut the veins in the Silver Globe, Lily B., Mary H., Chester A. Arthur, and two other claims, and a tunnel 300 feet long on the vein in the

Romantic lode, showing twelve feet in width between walls, containing iron and copper pyrites and galena disseminated through the vein-matter, and designed to cut the veins in the Grand Prize, Silver Globe No. 3, and New York.

**Silver King.**—(See Bennie and Litimer Group.)

**Silver Lake and Gretchen.**—Two claims, 300x1500 feet each; situated on Arastra Lake, or south slope of Round Mountain, four miles north-east of Silverton, Animas district, and located in 1877 and 1879; owners J. W. Collins and J. H. Reed, both Silverton, and Louis Gathmann, Chicago; vein a fissure, ten feet wide, pay streak six feet, containing galena in quartz, milling, when sorted, sixty per cent lead and forty ounces silver per ton; developments—one fifteen-foot shaft, one fifty-foot tunnel, and three open cuts, with ten-foot-faces each.

**Silver Lead Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1882; capital stock $12,000, paid-up, in 12,000 shares of $1.00 each, non-assessable; president and general manager, Alfred A. Hard, Cleveland, O.; vice-president, Lawrence Miller; secretary and treasurer, Ross Miller—both Durango; office Durango; owns the Carbonic lode, 300x1500 feet; situated on west side of Animas River, one mile south of Eureka, Eureka district, and in process of patent; vein a fissure, four feet wide, pay streak fifteen inches, containing galena, milling, when sorted, seventy per cent lead and fifteen ounces silver per ton; developed by two tunnels 100 feet long each, and two open cuts and tunnels twenty-five feet long each, ten feet under cover in each.

**Silver Ledge.**—300x1500 feet; situated on the west slope of Red Mountain, one-half mile north of Chattanooga, Red Mountain district, and located in January, 1883; owned by J. C. Bates, Ophir, C. E. Emery, Ames, P. H. O'Brien and J. N. Anderson, both Silverton, and J. P. Odenkirk, Chattanooga; vein probably a fissure, at least ten feet wide, an outcrop of thirty feet, nine feet of which is solid galena, milling probably, thirty-five per cent lead and thirty ounces silver, adjoining which is twelve inches of arsenical copper, probably milling twenty-five per cent copper, thirty per cent lead, and fifty ounces silver per ton; developments—an open cut, with an eighteen-foot face, and two drifts from end of cut twenty and eight feet long, the latter showing mineral all the way, and the former mineral with some gangue scattered through it.

**Silver Maid.**—(See Bonanza Group.)

**Silver Peak Mining Company.**—(*Limited*); incorporated in August, 1880, under the Companies Acts, 1862, 1867, and 1877, of Great Britain; capital stock £250,000, in 250,000 shares of £1 each; board of directors: T. Eyre Foakes, Esq., chairman, Hon. Randolph Stewart, Herman Schultz, Esq., Chas. H. Wilkinson, Esq., Richard J. Jenkins, Esq., C. E. and Joseph Taylor, Esqs.; board of reference—New York: E. W. Andrews, Esq., New York City, and Franklin J. Pratt, Esq., Greenfield, Mass.; bankers, the London and County Bank, limited; office No. 21 Moorgate street, London, E. C., England; agent, Capt. W. McFarlane, Animas Forks, Colo.; owns the Bonanza Tunnel property, consisting of the Bonanza Tunnel site, and the following locations: Ella Mehle, North Hampton, Charlemont, J. B. Norris (or Burrows No. 3), San Francisco, Star of Empire, Olympia, Mamie Pratt, Brooklyn and Brooklyn Extension, F. J. P., San Juan, Chris. Mehle, Milwaukee, Spencer B. Root, McGinnis, Hancock, Andrews, Colorado Miner, Silver Plume, Placer, and others; situated on Mineral Point Mountain, about one and one-half miles from Animas Forks, Eureka district; veins all well defined fissures, in many instances traceable on the surface for thousands of feet, containing rich silver-bearing ores, yielding, as shown by numerous assays, an average of 100 ounces silver, an U. S. Government official assay certifying that samples obtained from all the veins showed from 50 to 1,000 ounces per ton; for the development of which property a tunnel is being driven, started on the California Gulch slope and designed to cut through Mineral Point Mountain to the Poughkeepsie side, at a depth of from 200 to 1,300 feet and a total length of 7,000 feet, cutting in its course the veins in all the before-mentioned locations, and all the blind leads shown to exist in the prosecution of the work. That all these veins are rich is demonstrated by the quality of those cut by the tunnel, the principal of which is the J. B. Norris, forty feet wide, cut at a depth of 500 feet, showing galena, copper, and bismuth in pay streaks, varying in width, and assaying from 100 to 1,200 ounces silver per ton, 120 feet of drifting and cross-cutting fully proving its quality; the Charlemont seven feet wide, containing quartz, galena, iron and copper pyrites, and some bismuth, and a rich gangue-matter; Northampton and other lodes and feeders having little development, other than to prove their value, and all remarkable for their extent and richness; the tunnel is now in 1,350 feet, the results already accomplished being fully up to the expectation of the Company, whose course of systematic and practical development will make this undertaking both profitable and successful; the appliances being used in prosecuting the work are of the most improved kind, consisting of a sixty-horse-power steam-engine, a Clayton Air-compressor, two Ingersoll Air Rock Drills, with three-and-one-half-inch stroke, and a Laflin & Rand magnetic blasting apparatus.



**Silver Pitcher.**—300x1500 feet; situated in Prospect Basin, seven miles north of Silverton, Red Mountain district; located in September, 1882; owners, Elmer King, W. F. Mayfield, H. P. Roberts, J. W. Sites, and A. W. Hudson, all Silverton, W. H. Thomas, Jersey City, and E. M. Johnson, Beloit, Wis.; ore body probably a deposit, a shaft twelve feet deep showing galena and black copper for a distance of four feet, assaying ten per cent copper, fifty per cent lead, and twenty ounces silver per ton.

**Silver Queen.**—300x1500 feet; situated at the mouth of Mineral Basin, adjoining Red Mountain City on the north-west, Red Mountain district; located in January, 1883; owners Elisha and W. V. Richards, W. H. Thomas, and John Bowden, all Red Mountain City; vein a fissure six feet wide, containing quartz with galena and iron pyrites; developments—one twenty-foot shaft and one ten-foot-face cut.

**Silver Star.**—300x1500 feet; situated on the Diamond Lake slope of Sheep Mountain Peak, four and one-half miles east of Trout Lake and eight miles west of Silverton, Animas district; located in August, 1881; owners Amos Lane and Byron E. Cox, both Silverton; vein a fissure from six to eight feet wide, with two pay streaks, one on the hanging-wall six inches wide, and one on the foot-wall ten inches wide, containing galena, gray and yellow copper in quartz; the former milling, when sorted, forty-five ounces silver, and the latter 150 ounces silver per ton; developed by four open cuts with eighteen-foot faces each.

**Silver Star.**—300x1500 feet; situated on the west slope of Red Mountain, at Chattanooga, Red Mountain district; located in February, 1883; owners James and Daniel Sheridan, J. G. Warner, and Peter Flynn, all Chattanooga; vein a fissure seven feet wide, pay streak six inches, containing galena and yellow copper, assaying five per cent lead and eighty ounces silver per ton, in a quartz gangue; developed by one ten-foot-face cut and one tunnel fifty feet long, cutting vein thirty-five feet deep.

**Silver Star.**—300x1500 feet; situated on the west slope of Hazleton Mountain, three miles north of Silverton, Animas district; located in 1875, and patented in 1881; owners Harry B. Adsit, Silverton, George Eldridge,

Frank Magin, J. W. Preston, and W. S. Hubball, all Chicago; vein a fissure five feet wide, pay streak twenty inches, containing galena and gray copper in quartz, milling, when sorted, sixty-six per cent lead and fifty-four ounces silver per ton; developed by two tunnels 50 and 100 feet long, respectively, and three open cuts with twelve-foot faces each; output 150 tons.

**Silver Wing Mining and Reduction Company (The).**—Incorporated under the laws of Colorado, in December, 1876; capital stock $1,080,000, in 10,800 shares of $100 each, non-assessable; office Colorado Springs; owns the Silver Wing Group, eleven claims; situated on the Animas slope of Jones Mountain, two miles from Eureka, Eureka district; veins all fissures, apparently starting from one place, there being from twenty to forty, containing silver-bearing ores, all of which can be cut by one tunnel not more than 1,200 feet in length, the lodes varying in width from one to fifteen feet, pay streaks from one to twenty-four inches, containing near the surface arsenical and argentiferous gray copper (occurring in very small crystals), galena, copper sulphurets, copper pyrites, and zinc sulphurets, in a quartz gangue, generally carrying iron pyrites, assaying from $25 to $100 per ton in gold and silver; the pay streak in the Silver Wing averaging about twenty inches in width; developments—1,000 feet of work, the greater portion of which is on the Silver Wing lode.

**Silverton Mining Company (The).**—Incorporated under the laws of Colorado, April 4, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, W. R. Walkley, Brooklyn; vice-president and general manager, O. P. Posey, Silverton; secretary and treasurer, S. H. Wilcox, New York City; superintendent, J. R. Lattin, Silverton; offices *Tribune* Building, New York City, and Silverton, Colo.; owns the North Star No. 2; situated on the north slope of Sultan Mountain, one and one-fourth miles south of Silverton, Animas district; located in 1879, and patented in 1882; vein a fissure seven feet wide, pay streak from fifteen to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, twenty-seven per cent lead, fifty-four ounces silver, and one-tenth ounce gold per ton; developments—one level 500 feet long, connected with the surface by an upraise 200 feet long, one fifty-foot shaft from bottom of level, and several other upraises therefrom of fifty feet each; output fifteen tons per week.

**Silverton Park.**—300x1500 feet; situated on the north slope of Sultan Mountain, one mile south of Silverton, Animas district, and located in April, 1882; owner Matthew Moyle, Silverton; vein a fissure three and one-half feet wide, pay streak ten inches, containing gray and yellow copper, galena, and iron pyrites, in quartz, milling, when sorted, seven per cent copper, fifty per cent lead, and forty-six ounces silver per ton; developed by a drift 180 feet long and an eight-foot winze from the end of the drift.

**Sioux City.**—(See Burns Gulch Mining Company.)

**Slide.**—300x1500 feet; situated on the south slope of King Solomon Mountain, two and one-half miles south of Howardsville, Animas district, and located in 1878; owner W. J. Forsyth, Howardsville; vein a fissure 100 feet wide, with several pay streaks from two to eighteen inches in width, containing galena, gray copper, and quartz, assaying seventy ounces silver per ton; developed by three tunnels from ten to twenty-five feet long each and several openings on the vein.

**Snow-slide.**—Owned by D. J. Shaw, Durango, and Howard Doughty, Chattanooga; claim 300x1500 feet; situated in Mill Gulch, one and one-half miles west of Chattanooga, Red Mountain district, and located in March, 1883;



vein a fissure seven feet wide, containing quartz, with galena and gray copper, assaying $45 ($42 silver and $3 gold) per ton; developed by one ten-foot-face cut.

**Social Democrat.**—300x1500 feet; situated on the north slope of Sultan Mountain, one and one-fourth miles south of Silverton, Animas district, and located in May, 1881; owners Geo. H. Bradford, W. J. Grow, Albert Mayers, and F. A. Wingate, all Silverton; vein a fissure three and one-half feet wide, pay streak from eight to ten inches, containing quartz and galena, assaying fifty-three per cent lead and six ounces silver per ton; developed by one level 193 feet long.

**Solitaire.**—300x1500 feet; situated in Poughkeepsie Gulch, eleven miles north of Silverton, Uncompahgre district; located in January, 1883; owned by W. C. Edwards, Red Mountain Town, and D. M. Gass, Silverton; vein a fissure twenty feet wide, pay streak from twelve to twenty-four inches, containing galena, assaying from forty to sixty per cent lead and thirty ounces silver, iron pyrites assaying from five to thirty ounces gold per ton, and quartz; developments—one shaft 100 feet deep, from which run two drifts 50 and 170 feet long at depth of 50 and 100 feet, respectively; improvements—buildings and machinery.

**South Lookout Group.**—Owned by C. J. Marsh, Silverton, and others; group comprises six claims, 300x1500 feet each; situated on South Lookout Mountain, six and one-half miles north-west from Silverton, Red Mountain district; located in 1881; veins all fissures, as follows: in the Clyde (extension of Clipper) five feet wide, pay streak eight inches, containing galena and quartz, assaying forty-three per cent lead, from ten to fifteen per cent copper, 115 ounces silver, and seven-tenths ounce gold per ton; developed by a twenty-five-foot-face cut; in the Clyde No. 2 (extension of Clyde) the same characteristics; developed by a twenty-five-foot-face cut; in the Los Angeles (extension of San Antonio) the same characteristics (see Paradise Group); developed by a twenty-five-foot-face cut; in the Los Angeles No. 2 (extension of Los Angeles) the same characteristics; developed by a twenty-five-foot-face cut; in the Dunderberg twelve feet wide, pay streak four feet, containing quartz and galena, assaying thirty-seven per cent lead and thirty-one ounces silver per ton; developed by a twenty-five-foot-face cut; and in the Tip-top three feet wide, pay streak four inches, assaying fifty-five per cent lead and sixty-four ounces silver per ton; developed by a twenty-five-foot-face cut, and also a fifty-foot tunnel, designed to cut all these veins.

**St. Paul and Emerald.**—Two claims, 300x1500 feet each; situated on the west slope of Red Mountain, one mile south of Red Mountain Town, Red Mountain district, and located in September, 1882; owners Fred. C. Sherwin, Silverton, John Mullowney and Jos. A. Nock, both Red Mountain Town; ore body probably a deposit, two shafts twelve and ten feet deep, one on each claim, showing arsenical copper and quartz, assaying ten ounces silver and some gold per ton, and similar indications to Congress mine when similarly developed.

**Star of the West Group.**—Six claims, 300x1500 feet each, viz.: Star of the West, located 1878, Seventy-six, located 1880, North Star, located 1876, Mount Abraham, located 1880, White Swan, located 1877, and Ambush, located 1881; situated in Poughkeepsie Gulch, eight miles south-east of Ouray, Uncompahgre district; owners S. H. Woodlock, Ouray, and M. L. Robinson, Winfield, Kas.; veins all fissures from five to twenty-five feet wide, pay streaks from six to fifty inches, containing quartz, galena, and gray and yellow copper, assaying thirty-five ounces silver per ton; developments—three shafts, twenty, hirty, and fifteen feet deep, one tunnel 170 feet long, and one open cut thirty eet long.

**Stars and Bars.**—300x1500 feet; situated on the east slope, near the top, of Ophir Mountain, eleven miles north-west of Silverton, Animas district; located in July, 1882; owners John Pinkerton and Peter McCoy, both Ophir; vein a fissure twenty inches wide, pay streak five inches, containing galena and quartz, assaying thirty-two per cent lead and fifty ounces silver per ton; developed by one twenty-five-foot shaft.

**Storm Lake, Keystone, and Frankie and Ray.**—Three claims, 300x1500 feet each; situated at mouth of Prospect Basin, six miles north of Silverton, Red Mountain district; located in July and August, 1882; owner Frank Wetzel, Silverton; veins all fissures, two, five, and four feet wide, respectively, containing quartz, with galena and iron pyrites scattered through the vein-matter, assaying in the Keystone $5 in gold and silver all the way across; developments—three open cuts with ten-foot faces.

**Sultana.**—(See Moline Silver Mining Company.)

**Sunlight.**—Owned by J. L. Hill, New York City, and others; situated on Lake Mountain, one-half mile from Mineral Point; located in 1875; vein a fissure from five to ten feet wide, pay streak from one to six feet, containing galena, gray copper, and some brittle silver, in a quartz gangue, milling, when sorted, from fifty to seventy-five ounces silver per ton; developments—shafts and drifts.

**Sunnyside and Ben Franklin.**—Two claims, 300x1500 feet each; situated on the north fork of Eureka Gulch, Eureka district; veins both fissures, varying in width, and containing a quartz vein-matter and gangue, and galena and gray copper, milling, when sorted, $50 per ton; developments—assessment work; owned by Engleman, Webb, and others.

**Sunny South.**—300x1500 feet; situated on the north side of Mill Creek, one-half mile north-west of Chattanooga, Red Mountain district; located in March, 1883; owners J. W. Shields and Andrew Swan, both Chattanooga, and Isaac N. Covert and D. McFadden, both Durango; vein a fissure five feet wide, containing quartz and iron and copper pyrites, assaying seven per cent copper and twenty ounces silver per ton; developed by one ten-foot-face open cut.

**Sunrise.**—300x1500 feet; situated on the west side of Mineral Gulch, three-quarters of a mile north of Chattanooga, Red Mountain district; located in January, 1883; owners Andrew Swan, Chattanooga, Isaac N. Covert and T. P. Lindsay, both Durango, and Wm. Merrifield, Silverton; ore body probably a deposit; developed by one ten-foot-face cut and one tunnel ten feet long, showing indications similar to the Silver Ledge.

**Superior.**—300x1500 feet; situated on the west slope of Jones Mountain, one-half mile north of Eureka, Eureka district; located in 1878, and in process of patent; owners C. Wuertz, A. Ressler, and Harmon & Price, all Cleveland, O.; vein a fissure six feet wide, pay streak forty inches, containing quartz, galena, and iron pyrites, with antimonial and bismuth silver, assaying from twenty to forty per cent lead, from fifteen to forty ounces silver, and as high as one ounce gold per ton; developments—105-foot tunnel and fifteen-foot open cut.

**Thomas F. Bayard.**—300x1500 feet; situated in Mill Gulch, one-half mile north-west of Chattanooga, Red Mountain district, and located in January, 1883; owner H. P. Walton, Silverton; vein a fissure three feet wide, pay streak twelve inches, containing gray and yellow copper in a quartz gangue, milling, when sorted, fifteen per cent copper and thirty ounces silver per ton; developed by an open cut and tunnel fifteen feet long, ten feet of which is under cover.



**Three Brothers.**—300x1500 feet; situated in Poughkeepsie Gulch, twelve miles north of Silverton, Uncompahgre district; located in 1877, and patented; vein a well defined fissure, probably fifty feet in width, containing a quartz vein-matter and gangue, and gray copper ore, assaying from 50 to 200 ounces silver per ton; developments considerable.

**Thunder-bolt.**—(See Michigan and San Juan Mining Company.)

**Ticonderoga.**—300x1500 feet; situated in Mill Gulch, three-fourths of a mile west of Chattanooga, Red Mountain district, and located in 1880; owners F. A. Thing, James McLaughlin, and James Ogle, all Silverton; vein a fissure three feet wide, pay streak twelve inches, containing galena and quartz, assaying ten per cent lead and twenty-three ounces silver per ton; developed by one drift fifty-seven feet long.

**Tilden.**—(Extension of Caucasus); 300x1500 feet; situated near head of Cement Creek, nine and one-half miles north of Silverton, Eureka district, and located in August, 1877; owner J. V. Kilbourn, Silverton; vein a fissure eight feet wide, pay streak five feet, containing galena, gray copper, and quartz, assaying twenty-five per cent lead and thirty ounces silver per ton; developed by one ten-foot shaft, one cut twenty-five feet long, running into the shaft, and one open cut and cross-cut tunnel sixty-five feet long, forty feet of which is under cover, showing mineral in the breast.

**Tom Moore Mining Company (The).**—President, J. B. Fay, Topeka, Kas.; vice-president, A. E. Skinner, Westfield, N. Y.; secretary, E. F. Underhill, New York City; superintendent, R. S. Cross, Eureka; owns the Tom Moore (principal claim), Robert Burns, Byron, G. F. Parmalee, and Emma; situated on the Animas slope of Jones Mountain, two and one-half miles from Animas Forks, and one and a half miles from Eureka; vein a fissure, in the Tom Moore fifty feet wide, with three pay streaks, one near the hanging-wall thirteen inches, containing galena and gray copper almost solid, milling, when sorted, 200 ounces silver per ton, one in the center from two to six feet, containing gold quartz, galena, gray and native copper, assaying twenty per cent copper, $50 in gold, and from 100 to 500 ounces silver per ton, and one on the foot-wall eight inches, containing galena in a quartz gangue, milling, when sorted, 150 ounces silver per ton; and in the Byron galena and zinc (associated but not combined); developments—on the Tom Moore two tunnels, the upper cutting the vein and the lower designed to cut the vein, but showing mineral 600 feet, and 200 feet of open cuts; on Byron a level 500 feet long and some other workings; shipments 100 tons, averaging fifty per cent lead and fifty ounces silver per ton; improvements—ore-houses, shaft-houses, etc, with a tram-way and concentrating-works under advisement.

**Torrens.**—(See Finley Torrens.)

**Tower Mountain Silver Mining Company (The).**—Incorporated under the laws of Colorado in March, 1883; president, secretary, and treasurer, Peter Gray; vice-president, Wm. J. Gray—both Philadelphia; manager and agent, O. P. Gorsage, Eureka; offices 340 Walnut street, Philadelphia, and at Eureka; owns the Giant Tunnel site, 10x3000 feet; situated on the east slope of Tower Mauntain, one-half mile west of Middleton, Eureka district; on which a tunnel is now driven 260 feet long, cutting vein No. 1 194 feet deep, a blind lead, not appearing on the surface, four inches wide, containing galena and gray copper, milling, when sorted, eighteen per cent copper and

fifty ounces silver per ton, and designed to cut the vein; and Little Giant claim, 300x1500 feet; situated on the same slope of the mountain, and located in July, 1880; vein a fissure fifty-three feet wide, pay streak twenty-four inches, containing galena and yellow copper, assaying at the surface $44.40 per ton, and another pay streak six feet wide, containing quartz, yellow copper, and galena, assaying $26 per ton; developments—two open cuts with twelve and fourteen foot faces and a six-foot tunnel from end of the last.

**Trans-Atlantic.**—300x1500 feet; situated on the west slope of Boulder Mountain, three and one-half miles north of Silverton, Animas district, and located in 1878; owned by Joseph P. Reynolds, Martin McCormick, and Dennis Fitzgerald, all Silverton; vein a fissure fifteen feet wide, pay streak twenty-four inches, containing galena and gray copper in quartz, milling, when sorted, ninety-four ounces silver per ton; developed by a twenty-foot-face cut and a ninety-eight-foot tunnel designed to cut vein eighty feet deep.

**Treasure Mountain Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and general manager, D. W. Ayres, Durango; vice-president, H. G. Billings; secretary and treasurer, Mark Ayres—both Chicago; offices 149 Wabash Avenue, Chicago, Silverton and Durango; owns the Pacific, Pacific Extension, Atlantic, Watseka, and Justice, five claims, 300x1500 feet each; situated on the west slope of Treasure Mountain, one and one-half miles south-west of Animas Forks, Eureka district; located in 1881; veins all fissures, from five to thirty feet wide, pay streaks from ten to fifty inches, containing galena and iron pyrites in quartz (concentrating-ore), assaying from $10 to $30 per ton; the Justice containing fine-grained galena in quartz, milling, when sorted, from $20 to $25 per ton in gold and silver; developed by one tunnel 400 feet long, designed to cut the veins in the first four claims, one fifty-foot tunnel on Justice, and two open cuts with fifteen-foot faces each; Allison and Widow Bedott (both full), adjoining each other on the same vein; situated in Grouse Gulch, two miles south-east of Animas Forks, Eureka district; vein a fissure, from five to eight feet wide, containing quartz, galena, and iron pyrites, assaying from 10 to 100 ounces silver per ton; developed by two open cuts, with fifteen-foot faces each; Excelsior and Eureka, two adjoining claims on the same vein; situated on Red Mountain, one mile east of Red Mountain Town, Red Mountain district; located in 1881 and 1882; vein probably a fissure, seven feet wide, containing galena, iron and copper pyrites, and star silver, in quartz, assaying from $15 to $100 per ton; developed by one fifteen-foot shaft and two open cuts with ten-foot faces each; Whittier and Longfellow, 300x1500 feet each; situated on the divide between Mineral and Red Mountain Creeks; located in 1881; ore body probably a deposit, one twenty-foot tunnel and one twenty-foot open cut on each claim showing pyrites of iron and galena in quartz; Judex placer, 160 acres, at Red Mountain City; located in July, 1881; developments—100 yards of ditching and one building.

**Trego.**—300x1500 feet; situated in Fairview Basin, five miles west of north from Silverton, Red Mountain district; located in 1882, and in process of patent; owner M. I. Barker, Cincinnati; agent, Perry Ellis, Silverton; vein a fissure, six feet wide, pay streak thirty-six inches, containing galena and quartz, assaying thirty per cent lead and fifteen ounces silver per ton; developed by a tunnel twenty-four feet long.

**Turkois.**—300x1500 feet; situated on the north fork of Mineral Creek, three-fourths mile north of Chattanooga, Red Mountain district; located in January, 1883, and in process of patent; owners Dr. J. S. Lawrence, C. F. McCoin, and Chas. Liddell, all Silverton; vein probably a fissure, four and one-half feet wide, containing galena and arsenical copper, assaying twenty



per cent copper, twenty-five per cent lead, thirty ounces silver, and some gold per ton; developed by a shaft forty feet, showing mineral on two sides all the way down and the walls on the other two sides.

**Tuttle's Peak Mining Company (The).**—Incorporated under the laws of Colorado, October 15, 1880; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, S. P. Parmly; vice-president, S. D. Foss; secretary, E. S. Hunt; treasurer, M. P. Forster—all Chicago; agent and manager, J. R. Hunt, Animas Forks; offices 136 East Madison street, Chicago, and Animas Forks; owns Mountain Maid, 300x1500 feet; situated on the Mineral Basin Slope of Mineral Point Mountain, one and one-half miles north-west of Animas Forks, Eureka district, and patented in May, 1883; vein a fissure, twelve feet wide, pay streak twenty-six inches, containing steel galena and gray copper, average assays forty ounces silver per ton, in a quartz gangue, this mineral appearing eight feet from the surface; developments—one twenty-five-foot tunnel, showing three feet of galena of same quality as before; and owns Royal Arch, Boston Belle, and Victoria, three prospects; situated in Poughkeepsie Gulch, Uncompahgre district.

**U. S. Treasury Consolidated Mines.**—Four claims, viz., U. S. Treasury and U. S. Mint, 300x1500 feet each, and Cary and Stonewall, 300x1200 feet each; situated on South Lookout Mountain, and in Ruby Gulch, eight miles north of west from Silverton, Red Mountain district; located in 1876, and patented in 1883; owners E. W. Hodges and J. H. Fuqua, both Silverton, E. J. Luesley, Colorado Springs, and B. F. Hammett, St. Louis, Mo.; veins all fissures, from fifteen to twenty-five feet wide, pay streaks thirty-six, thirty-six, fourteen, and ten inches wide, respectively, containing heavy galena in a quartz gangue, milling, when sorted, sixty-five per cent lead and thirty ounces silver per ton; developments—on U. S. Treasury one tunnel 336 feet long, cutting vein 300 feet deep, on which there is 147 feet of drifting, on U. S. Mint three shafts from twelve to twenty-five feet deep, on Cary one twenty-five-foot shaft, and on Stonewall one cut with a twenty-foot face; output 200 tons.

**Uncompahgre Mining and Smelting Company (The).**—Incorporated under the laws of Colorado; president, Jesse R. Blydenburgh; treasurer, —— Webb; assistant treasurer, Warren Beebe—all New York City; general manager, P. W. Jones, Amherst, New Hampshire; owns a concentrator, situated at Middleton, Eureka district, containing one Blake Crusher, one Pulverizer, four Rogers Jigs, two revolving screens, forty-horse-power engine, boiler, etc.; capacity thirty tons per day; and owns three claims, 300x1500 feet each, viz.: Uncompahgre Chief, situated on Lake Mountain, one-third mile south of Mineral Point, Uncompahgre district, and patented; vein a fissure twenty feet wide, pay streak forty inches, containing quartz, gray copper, brittle silver, and galena, which assayed, at a depth of forty-five feet, 841 ounces silver per ton; developed by a seventy-five-foot shaft and 100 feet of drifts; Little Jewel and Little Maid, three-fourths mile east of Mineral Point, on Engineer Mountain, Uncompahgre district, and patented; veins both fissures, varying in width, pay streaks twenty and ten inches wide, respectively, containing gray copper, brittle silver, and galena, in the first, and galena in the last; developments—a fifty-foot tunnel on each claim.

**Valley View.**—300x1500 feet; situated on the west slope of Red Mountain, one-fourth mile east of Chattanooga, Red Mountain district, and located in February, 1883; owners Wm. H. Emberson and John R. Porter, both Chattanooga, Chas. A. Liddell and J. W. Fleming, both Silverton; vein a fissure from four to five feet in width, containing three feet of quartz, galena, and copper pyrites, assaying twenty-five ounces silver per ton, and eighteen inches of gold-bearing quartz, showing specks of gray copper; developments—two cuts with ten and twelve foot faces, with an eight-foot shaft from end of first.

**Vermont and Canada.**—Two parallel claims, 300x1500 feet each; situated on Lake Mountain, at Mineral Point, and located in 1875; owned by Guy C. Nobles, St. Albans, Vt., C. C. Colby, Stanstead, Province of Quebec, and A. H. Moore, Magog, Province of Quebec; veins both fissures, in the former four feet wide, pay streak five inches of quartz, gray copper, galena, and iron pyrites, assaying sixty ounces silver per ton; developed by a thirty-foot shaft and a fifty-foot tunnel; and in the latter five feet wide, pay streak ten inches of quartz, galena, and iron pyrites; developed by a thirty-foot shaft.

**Via.**—300x1500 feet; situated on the south slope of Kendall Mountain, two and one-half miles south-east of Silverton, Animas district, and located in August, 1879; owner J. H. P. Voorhies, Silverton; vein a fissure twenty feet wide, containing decomposed quartz, galena, and lead carbonates, assaying from twenty to twenty-five per cent lead and from twenty to twenty-five ounces silver per ton; developments—three open cuts with ten-foot faces each.

**Victoria Consolidated Mines.**—(Montezuma Tunnel); owned by Jno. F. Williams, Silverton; three claims, 300x1500 feet each, situated on the north slope of Sultan Mountain, one mile south of Silverton, Animas district, viz.: Victoria, located in 1873; vein a fissure four feet wide, pay streak twenty inches of galena, gray and yellow copper, and iron pyrites, in quartz, milling, when sorted, ten per cent copper, twenty per cent lead, and sixty ounces silver per ton; developed by one twenty-five-foot shaft; Ajax, located in 1872; vein a fissure four feet wide, pay streak eighteen inches of galena and gray and yellow copper in quartz, milling, when sorted, ten per cent copper, fifteen per cent lead, and sixty ounces silver per ton; developed by a tunnel (the Ajax) 340 feet long, cutting vein at depth of 110 feet, on which there is twenty-five feet of drifts, and connected with the surface by one 110-foot shaft; Little Dora, located in 1872; vein a fissure four feet wide, pay streak twelve inches of galena and gray and yellow copper in quartz, milling, when sorted, ten per cent copper, fifteen per cent lead, and fifty ounces silver per ton; developed by a tunnel (the Montezuma) 450 feet long, cutting vein at depth of 300 feet, on which there is ten feet of drifting, and designed to cut the Victoria vein—this on a tunnel site 3000x6 feet; located in August, 1876.

**Voxal.**—300x1500 feet; situated on the Summit of Red Mountain, one-half mile east of Red Mountain City, Red Mountain district; located in September, 1882; owners Geo. H. Bradford and S. E. Herr, both Silverton; ore body probably a deposit, a shaft twenty-two feet deep showing arsenical copper on the bottom.

**Waldron Consolidated Silver Mining Company (The).**—Incorporated under the laws of New York; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, Nathan E. Seeley; vice-president, G. Livingston Morse; secretary, Sidney E. Morse; treasurer, Robert White—all New York City; office Room 70 Morse Building, 140 Nassau street, New York; owns six claims, 300x1500 feet each, viz.: Waldron, Adelia, Hitewing, Hafer, Buffalo, and Silver; situated on Mineral Point Mountain, near Mineral Point, and ten miles from Ouray, Uncompahgre district, and all patented except the Hafer, in process; veins all fissures from ten to twenty feet wide, pay streaks from fifteen to thirty inches, and in the Adelia twenty-six inches, resting on the foot-wall, and composed of gray copper, iron and copper pyrites, fine-grained galena, and quartz; developments—one shaft 100 feet deep and 120 feet of drifting; in the Hitewing thirty inches, the general character of the ore the same as others, iron pyrites, galena, and quartz, assaying from 25 to 200 ounces silver per ton, and milling, when sorted, from 50 to 100 ounces; developments—one thirty-foot shaft on the Hitewing, on the others assessment work and one tunnel 400 feet long, running on the Waldron and Hafer veins, designed to cross-cut the Clara and intersect the Silver Peak Mining Company's property; improvements—shaft-house and cabins.



**Walla Walla, El Paso, and Lead King.**—Three claims, 300x1500 feet each; situated in Minnesota Gulch, one mile south-west of Eureka, Eureka district; located in 1880; owners W. P. Cobb, J. R. McKinnie, both Eureka, Wm. Windom, Winona, Minn., and P. L. McKinnie, Moline, Ills.; veins all fissures, in the Walla Walla twenty feet wide, containing quartz, galena, and gray and yellow copper, assaying sixty ounces silver per ton; developments—one tunnel sixteen feet long; in the El Paso five feet wide, pay streak thirty inches, containing galena, iron and copper pyrites in quartz, milling, when sorted, $15 per ton; developed by a tunnel twenty-two feet long on vein; and in the Lead King five feet wide, pay streak ten inches of solid galena and copper pyrites, assaying seventy-five per cent lead, ten per cent copper, and fifteen ounces silver per ton; developments—a fourteen-foot-face cut.

**Washington.**—300x1500 feet; situated at the head of Cascade Creek, fifteen miles south-west of Silverton, Animas district, and located in July, 1882; owners J. C. McManus and W. O'Connell, both Durango, and H. O. Willis, Rico; vein a fissure forty inches wide, pay streak twelve inches, containing galena and gray copper in quartz, assaying seventy-five ounces silver per ton; developed by one open cut with a fifteen-foot face.

**Washington and Constantine.**—Two claims 300x1500 feet; situated on Cement Creek, two and one-half miles north of Silverton, Animas district, and located in 1879 and 1881; owner A. B. Wattles, Silverton; veins both fissures, in the former eight feet wide of quartz with gray copper, assaying thirty ounces silver per ton; developed by one ten-foot-face cut; and in the latter three streaks of galena and zinc blende, aggregating thirty inches in width; developments—one thirty-foot cut and tunnel, ten feet of which is under cover.

**Washington and No Name.**—300x1500 feet each; situated on the north fork of Eureka Gulch, Eureka district; owned by McNutt and Engleman, Eureka; veins both fissures varying in width, and containing fine-grained galena in quartz; developments—assessment work.

**Water-fall Group.**—Owned by Frank R. Downing and Swan Peterson, both Eureka; group comprises five claims, 300x1500 feet each; situated at the mouth of Burns' Gulch, two miles north of Eureka, Eureka district; veins all fissures, as follows: in the Annetta (located in 1875, and in process of patent) thirty feet wide, pay streak twenty inches of yellow and gray copper, assaying twenty-five per cent copper and forty ounces silver per ton; developed by a seventy-eight-foot tunnel on the vein; in the Silver Eagle (located in 1876, and in process of patent) twenty feet wide, pay streak thirty inches of gray and yellow copper and iron pyrites, assaying twelve per cent copper and forty ounces silver per ton; developed by a twelve-foot-face cut; in the Pontoon No. 2 (located in 1876, and in process of patent) ten feet wide, pay streak twenty inches of gray and yellow copper and iron pyrites, assaying eighteen per cent copper and fifty ounces silver per ton; developed by a ten-foot-face cut; in the Crown (located in 1876, and in process of patent) six feet wide, pay streak twenty-four inches of galena and some black copper in a quartz gangue, milling, when sorted, thirty-five ounces silver per ton; developed by a seventy-five-foot tunnel on the vein; and in the Old Domingo (located in 1881, and in process of patent) thirty feet wide, pay streak twenty inches of galena and some gray and yellow copper, which assays from sixteen to twenty-two ounces silver per ton; developed by a twelve-foot tunnel and a twelve-foot-face cut.

**Way Up.**—300x1500 feet; situated on the west slope of Red Mountain, one-third mile south-west of Red Mountain Town, Red Mountain district, and located in January, 1883; owners W. E. Leslie, E. H. Cooper, and F. H.

Miner, all Red Mountain Town, and John Leslie, San Miguel City; ore body probably a deposit, one ten-foot tunnel showing quartz carrying galena across the entire breast.

**Whale.**—300x1500 feet; situated on the south slope of Round Mountain, four miles north-east of Silverton, Animas district, and located in 1875; owners Michael and John O'Neil, both Silverton; vein a fissure four feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, fifty-five per cent lead and seventy-five ounces silver per ton; developed by one cross-cut tunnel ninety feet long, from end of which is an eighty-foot drift.

**Whale.**—300x1500 feet; situated on the Cunningham Gulch slope of King Solomon Mountain, one-half mile south-east of Howardsville, Animas district; located in 1878, and patented in 1883; owned by Wm. Alley, Red Mountain Town; vein a fissure eight feet wide, pay streak twenty inches, containing galena in quartz, milling, when sorted, fifty per cent lead and forty ounces silver per ton; developed by a shaft twenty-five feet deep, with some other workings.

**Wheal Mary Ann.**—300x1200 feet; situated on the north-east slope of Sultan Mountain, three miles south of Silverton, Animas district; located in 1877, and in process of patent; owners John R. Perry and John M. Gundry, both Silverton; vein a fissure four feet wide, containing iron and copper pyrites in quartz, milling, when sorted, fifteen per cent copper and thirty ounces silver per ton; developed by a fifty-foot shaft on the vein.

**White.**—(See Chicago Enterprise Mining Company.)

**William Penn Mining Company.**—Owns the William Penn and another property, 300x1500 feet each; situated on the Animas slope of Jones Mountain, about two miles from Eureka; veins both fissures, varying in width, and containing quartz, galena, gray copper, and some brittle silver, assaying from 50 to 250 ounces silver per ton; developments—open cuts, shafts, and tunnels; and it is the intention of the Company to work it systematically.

**Wilberforce, Pembina, and Lookout.**—Three claims, 300x1500 feet each; the first two parallel and the last crossing them; situated on the east slope of Red Mountain, four miles west of north from Silverton, Animas district; located in 1880, 1881, and 1882; owners Jessie Herr, David Herr, and D. W. Williams, all Silverton; veins all fissures, in the first three feet wide, containing mineralized quartz, with galena, iron and copper pyrites, and zinc, assaying twenty ounces silver per ton; developed by one thirty-foot tunnel; in the second from eighteen to twenty inches wide of porphyry, with galena, iron and copper pyrites, assaying twelve ounces silver per ton; developed by two cuts with ten and fifteen foot faces; and in the third probably a "blow-out," showing twenty feet of quartz carrying galena; developed by one twenty-foot tunnel.

**Willis.**—300x1500 feet; situated at the head of Limestone Creek, twelve miles south-west of Silverton, Animas district; located in July, 1882; owners J. C. McManus and W. O'Connell, both Durango, and H. O. Wills, Rico; vein a fissure three feet wide, containing galena and gray copper in quartz, milling, when sorted, fifty-five ounces silver per ton; and there is also a contact vein with lime foot-wall and porphyry and sandstone hanging walls, twelve feet wide, crossing the fissure and containing chlorides and ruby silver in a lime quartz gangue, milling, when sorted, 107 ounces silver per ton; developments—two open cuts with twenty-foot faces each on the contact, and two open cuts with ten-foot faces each on the fissure vein.



**Winfield S. Hancock.**—300x1500 feet; situated on the south-west slope of Boulder Mountain, two and one-half miles north of Silverton, Animas district; located in 1880, and patented in 1883; owners Wm. Sullivan and Jno. Carver, both Silverton; vein a fissure twenty feet wide, pay streak from twelve to fifteen inches, containing galena in quartz, milling, when sorted, fifty per cent lead and ninety-five ounces silver per ton; developments—one open cut with ten-foot face, and two drifts sixty-six and seventy feet long, respectively, with an eighteen-foot shaft from end of first; output twenty tons.

**Wood.**—(Extension of Columbia); 300x1500 feet; situated on south-west slope of Wood Mountain, three-fourths mile north-east of Animas Forks, Eureka district; owners John J. Crooke and Henry A. Wood, both Lake City; vein a fissure four feet wide, containing mineralized quartz; developed by one thirty-foot shaft.

**Zuni.**—(See Peerless Group.)

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# MINING ENGINEER,

—AND—

## U. S. Deputy Mineral Surveyor.

**TELLURIDE, - - COLORADO.**

Patent and Underground Surveys, Maps, Plans, Drawings, Specifications, and Reports on Mining Property accurately made.

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# San Miguel County.

This County was created by a division of Ouray in 1883, and is bounded on the north by Montrose and Ouray, on the east by Ouray and San Juan, on the south by San Juan and Dolores Counties, and on the west by Utah Territory. It has an estimated population of 1,000, with Telluride (county seat), Ophir, Ames, Pandora, and San Miguel City as its principal towns, and covers an area of 1,200 square miles, the greater portion of which is devoted to stock-raising and agriculture, the mining section being confined to the eastern end.

The formation is, with very few exceptions, eruptive, belonging to the great Tertiary overflow of the San Juan Range, and the veins almost invariably strong and well-defined fissures, originating in the Archaen rocks, passing thence up through the eruptive to the surface, and frequently traceable for miles. A portion of these veins carry only argentiferous ores, and others are auriferous, containing very little silver, the gangue, or matrix, of the minerals being quartz, rarely sulphate of baryta, and exceptionally fluorite, and usually highly crystalline. The precious contents of the lodes are galena, sphalerite, freibergite, chalcopyrite, pyrite, bismuth silver, native silver, free gold, and argentite, yielding, when sorted, as shown by numerous mill-runs, in large and small lots, an average of $200 per ton.

San Miguel County is well timbered and well watered, and possesses inexhaustible mineral resources. Its chief drawback is its isolation from railways, ore markets, and supply depots. Montrose, a station on the D. & R. G. R'y, about seventy-five miles from Telluride, is the nearest rail connection, and only the very rich ores can be shipped, the existing means of transportation consuming too much of the gross value. Should the railway, as is not improbable, be extended from Montrose, there is no doubt that, with the advantages thereby afforded, San Miguel would send to the smelters and ore markets, from the sources already opened, hundreds of tons per day.

In addition to the lode mines, there are some valuable and productive placers on the San Miguel River and its tributaries, which have been profitably worked for several years.

**A.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north of Ophir, Iron Springs district; located in September, 1877, and patented in 1882; owners A. W. Neumeyer, Trout Lake, Jacob Young and M. H. Gillett, both New York City; vein a fissure four feet wide, containing gold quartz, milling, when sorted, four ounces gold and eight ounces silver per ton; developed by one tunnel and open cuts, valued at $500.

**Abbington.**—300x1500 feet; situated on the divide between Ingram and Marshall Basins, three and one-half miles east of Telluride, Upper San Miguel district; located in August, 1881; owner J. W. McKee, Telluride; vein a fissure four feet wide, pay streak fourteen inches, containing gold quartz, milling, when sorted $120 per ton; developed by one tunnel forty feet long.

**Ajax.**—(See Eclipse Mining Company.)

**Alamo.**—300x1500 feet; situated in Lower Marshall Basin, two and one-half miles east of Telluride, Upper San Miguel district; located in May, 1879, and patented in Feb'ry, 1883; owners Moses Hallet, Denver, and Geo. A. Bute, Pueblo; vein a fissure six feet wide, pay streak thirty inches, containing gold and silver bearing quartz, milling, when sorted, $50 per ton; developed by one tunnel on the vein 80 feet long and one cross-cut 100 feet long.

**Albano.**—300x1500 feet; situated in Ingram Basin, five miles north-east of Telluride, Upper San Miguel district; located in June, 1881; owners the Treasure Mountain Mining and Milling Company (see San Juan County); vein a fissure four feet wide, pay streak fourteen inches, containing galena, copper pyrites, and quartz, assaying from $30 to $60 per ton; developed by two open cuts with fifteen-foot faces each.

**Allie.**—300x1500 feet; situated on the south side of Howard Fork of San Miguel River, one and one-half miles south-east of Ames, Iron Springs district; located in March, 1883; owners L. E. Cone, A. E. Turner, and Fred. J. Robins, all San Miguel City; vein a fissure thirty inches wide, pay streak from four to six inches of gold-bearing quartz and galena; developed by one ten-foot-face open cut.

**Alpine.**—300x1500 feet; situated on the south-east slope of St. Bernard Mountain, one-half mile west of Trout Lake, Iron Springs district; located in September, 1882; owners A. F. Ghiglione and Maurizeo and Antilio Giannini, all Trout Lake; vein a fissure three feet wide, pay streak from one to two inches, containing galena and gray copper; developed by one ten-foot-face cut.

**Alta.**—(See Silver Mountain Mining Company.)

**Amazon.**—300x1500 feet; situated in Water-fall Basin, one mile south of Ophir, Iron Springs district; located in November, 1882; owners Alexander Gregg, Herman Nieland, and Robert Young, all Ophir; vein a fissure forty inches wide, pay streak three inches, containing galena, gray copper, and quartz, assaying sixty-five ounces silver per ton; developed by one tunnel fifty feet long.

**American Exchange.**—300x1500 feet; situated in Bridal-veil Basin, four miles south-east of Telluride, Upper San Miguel district; located in February, 1878; owners Becker Folsom and J. S. Kerr, both McPherson, Kas.; vein a fissure thirty inches wide, containing galena and gray copper in quartz, milling, when sorted, $60 per ton; developed by three open cuts from fifteen to twenty feet long each and one shaft fifteen feet deep.

**American Midland Mining and Milling Company (The).**—Incorporated under the laws of Connecticut, in 1880; capital stock $1,250,000, in 50,000 shares of $25 each, non-assessable; president, S. D. Loring, Boston; managing director, Mark Folsom, Ames; superintendent, John C. Curtis, Ophir; office 51 State street, Boston, and at Ophir; owns two claims, 300x1500 feet each, viz., Caribou and Keystone; situated on the north slope of Yellow Mountain, three-fourths mile south-west of Ophir, Iron Springs district; located in 1878, and patented in 1882; vein a fissure five feet wide, pay streak from ten to twenty inches, containing galena and gray copper, milling, when sorted, forty per cent lead and eighty ounces silver per ton; developed by one shaft 350 feet deep, out of which run levels 200 feet long each at intervals of sixty feet from the bottom upwards, one cross-cut 180 feet long, with a Joplin Whim for hoisting; output 900 tons.



**Andrus.**—300x1500 feet; situated in Ingram Basin, five miles east of Telluride, Upper San Miguel district; located in May, 1879; owners Geo. S. Andrus, J. P. Redick, and Angus McDonald, all Telluride, and C. C. Savage, Brooklyn, N. Y.; vein a fissure, from ten to thirty feet wide, pay streak three feet, containing galena, and copper carbonates, and quartz, milling, when sorted, twelve per cent copper and $30 in silver per ton; developed by one sixty-foot tunnel and two open cuts.

**Arctic Region.**—300x1500 feet; situated in Upper Ingram Basin (Treasure Creek), three miles east of Telluride, Upper San Miguel district; located in September, 1880; owners J. W. McKee, Telluride, R. W. Haskins, Ouray, and W. A. Sherman, Chicago; vein a fissure, four feet wide, pay streak from twenty to twenty-four inches of quartz carrying gold, assaying $80 per ton; developed by one tunnel thirty feet long.

**Argentine.**—(See Marshall Basin Mining Company.)

**Argentine.**—300x1500 feet; situated on the north side of Mill or Park Creek, four miles north-east of San Miguel City, Upper San Miguel district; located in September, 1880; owners David M. Cooper and W. R. Fisher, both San Miguel City; vein a fissure, forty inches wide, pay streak from six to twelve inches of galena and quartz, assaying $10 gold and thirty ounces silver per ton; developed by one twenty-five-foot tunnel and three open cuts with fifteen-foot faces each.

**Atlanta.**—300x1500 feet each; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district; located in June, 1877; owners Jas. A. Watton, Ames, and J. C. Rutan, San Miguel City; vein a fissure, four feet wide, pay streak from twelve to fifteen inches of gold and silver bearing quartz, milling, when sorted, from $100 to $125 per ton; developed by one tunnel 100 feet long.

**Atlas, Globe, and Suffolk.**—Three claims, the first two adjoining each other on the same vein, 300x1500 and 300x1200 feet, respectively, and the third (a supposed extension of Gold King), crossing the others, 300x1500 feet; situated on the south slope of Silver Mountain, one mile north of Ophir, Iron Springs district; located in September, 1878, and in process of patent; owners M. J. Alkire, Ophir, B. O'Driscoll and L. F. Hollingsworth, both Silverton; veins both fissures, the former three feet wide, pay streak two inches, containing gold-bearing quartz, milling, when sorted, sixteen and one-half ounces gold and eleven and one-half ounces silver per ton; developed by one open cut and drift 150 feet long, 100 feet of which is under cover, two open cuts with ten-foot faces each; in the Suffolk twelve feet wide, pay streak from four to five feet of gold-bearing quartz, milling, when sorted, $40 per ton; developed by an open cut and tunnel sixty feet long, fifty feet of which is under cover.

**Aurora, New Australia, and Lady Elgin.**—Owners F. H. Miner, Red Mountain Town, and P. J. Carroll, Lake City; three claims, 300x1500 feet each, the first two adjoining on the same vein and the last parallel; situated on the east side of Bear Creek, two miles south-east of Telluride, Upper San Miguel district; located in 1879; veins both fissures, from one to five feet wide of quartz, carrying gold and silver, milling, when sorted, $100 per ton; developed by two open cuts with ten-foot faces each and a tunnel twenty-five feet long.

**Aztec and Monitor.**—Two claims, 300x1500 feet each; situated on the south fork of Turkey Creek, four miles north-east of Ames, Upper San Miguel district; located in January, 1883 and July, 1882; owners W. R. Vanderveer and S. T. Hanley, both Ames; veins both fissures forty inches wide

each, pay streak, in the former, from three to six inches wide, containing galena, gray copper, and chlorides, in quartz, milling, when sorted, $60 per ton; developed by one ten-foot-face cut; in the latter from three to ten inches wide, of black manganese, galena, and iron, in quartz, milling, when sorted, $30 per ton; developed by one sixty-foot shaft.

**Baby Elephant.**—(On the Big Elephant vein); 300x131 feet; situated in Savage Basin, five miles east of Telluride, Upper San Miguel district; located in August, 1881; owners T. S. Mathis and Geo. S. Andrus, both Telluride; vein a fissure sixteen feet wide, pay streak from twenty to forty inches, containing gold-bearing quartz and galena, assaying from $20 to $45 per ton; developed by one open cut twenty feet long, with a twelve-foot face.

**Baird and Chamberlain.**—Two claims, 300x1500 feet each; situated on the Water-fall slope of Yellow Mountain, two miles south-west of Ophir, Iron Springs district; located in May, 1881; owners Orrin Parsons, Ophir, Hubbard Baird, Westboro', Mass., and Jas. W. Chamberlain, Boston, Mass.; veins both fissures, from two to four feet wide, containing gold and silver bearing quartz, assaying $40 per ton; developed by two ten-foot-face open cuts and one fifteen-foot tunnel.

**Bald Beck.**—300x1500 feet; situated in Prospect Basin, five miles north-east of Ames, Upper San Miguel district; located in October, 1881; owner R. Dunkelburger, Ogden, Ia.; vein a fissure, from one to seven feet wide, of copper-stained quartz, assaying $14 per ton; developed by one twenty-five-foot open cut.

**Ballard.**—300x1500 feet; situated on the south-west slope of Ballard Mountain, two miles south-east of Telluride, Upper San Miguel district; located in 1878; owners W. H. Gabbert and W. T. McGarvey, both Telluride, S. S. Snyder, J. C. and W. H. Weller, F. C. La Blonde, L. Jones, and D. J. Roop, all Celina, Ohio; vein a fissure, four feet wide, pay streak eighteen inches of gold-bearing quartz, assaying $100 per ton; developed by five open cuts from ten to twenty feet long and aggregating eighty feet.

**Bannett and Cambridge.**—Two claims, 300x1500 feet each; situated on the north slope of Yellow Mountain, one and one-fourth miles south-east of Ophir, Iron Springs district; located in May, 1881; owners Aaron Jones, Ames, and M. M. Ross, Nevada, Iowa; vein a fissure four feet wide, pay streak six inches of galena and gray copper in quartz, milling, when sorted, 150 ounces silver per ton; developed by one fifty-foot tunnel and one fifteen-foot open cut.

**Bars, Nos. 2, 3, and 4, Placers.**—Three claims, covering 80, 160, and 80 acres; situated on the Lower San Miguel River, beginning at Placerville and extending two miles east, Lower San Miguel district; located in July, 1876; owners R. H. Stone, Telluride, O. P. Posey and Peter Houghton, both Silverton; production probably twenty-eight cents per cubic yard; developments—six tunnels from twenty-five to seventy-five feet in length, and aggregating 250 feet, one shaft thirty feet deep, and sixteen open cuts with ten-foot-faces each; all these bars and the bed-rock in them are about fifty feet above the present channel, and the gravel is about 150 feet deep.

**Bay State.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in August, 1878, and patented in January, 1883; owners F. E. Leland and Mrs. Jonas White, both Telluride; vein a fissure, four feet wide, pay streak eighteen inches of galena and gray copper, assaying eighty ounces silver per ton; developed by one thirty-foot shaft and one twenty-five-foot cross-cut tunnel.



**Beaver Dam Placer.**—120 acres, on the north fork of Prospect Creek, one and one-half miles south-west of San Miguel City, Upper San Miquel district, and located in June, 1880; owners F. R. Hamilton, San Miguel City, Peter Lonergan, Ashcroft, C. J. and Geo. J. Hamilton and C. S. Montague, all Muskegan, Mich., Barlow Davis and C. O. Trumbull, both Evart, Mich.; vein a horizontal contact thirty inches thick of hematite iron, milling fifty per cent iron and $4 gold per ton; developed by 500 feet of ditching and considerable surface-working.

**Belmont.**—300x1500 feet; situated in Marshall Basin, six miles north-east of Telluride, Upper San Miguel district; located in 1879, and in process of patent; owners Geo. P. Costigan, Telluride, and Wm. O'Neal, Portland; vein a fissure fourteen feet wide, pay streak thirty inches of galena and gray copper in quartz, milling, when sorted, fifty ounces silver per ton; developed by one sixty-foot shaft, two open cuts ten feet each, and a cross-cut is being run to cut vein 100 feet deep.

**Big Casino.**—300x1500 feet; situated on Sheep Mountain Peak and in Koneman's Basin, four and one-half miles east of Trout Lake, Iron Springs district, and located in July, 1881; owners Dr. J. P. Landon and Louis Sherbino, both Rico, Hiram Exstein and others, Buffalo, N. Y.; vein a fissure five feet wide, pay streak from ten to fifteen inches, containing sulphurets in quartz, milling, when sorted, 175 ounces silver per ton; developed by two tunnels sixty and fifteen feet long and one shaft sixteen feet deep.

**Big Chicago.**—Owned by G. E. Horman, Chicago; claim 300x1500 feet; situated on the Swamp Cañon slope of Yellow Mountain, Iron Springs district; vein a fissure four feet wide, pay streak from one to two feet, containing gold-bearing quartz, assaying from $10 to $40 per ton; developed by a twenty-foot tunnel and some other workings.

**Big Muskegan and Little Muskegan.**—Two claims, 300x1500 feet each; situated on the west slope of Gold Mountain, four miles south of San Miguel City, Upper San Miguel district, and located in June, 1880; owners F. R. Hamilton, San Miguel City, C. J. and Geo. J. Hamilton and C. S. Montague, all Muskegan, Mich., Barlow Davis and C. O. Trumbull, both Evart, Mich., and Peter Lonergan, Ashcroft; vein a fissure forty inches wide, pay streak from ten to twelve inches of free-milling gold-bearing quartz, milling $10 per ton; developed by two open cuts with fifteen-foot faces each and one thirty-foot cross-cut tunnel.

**Big Pittsburgh.**—300x1500 feet; situated on Sheep Mountain Peak four and one-half miles east of Trout Lake; located in 1881; owners Louis Sherbino and S. Enfield, both Rico; vein a fissure five feet wide, pay streak thirteen inches of sulphurets, gray copper, and quartz, assaying 150 ounces silver per ton; developed by one drift twenty feet long.

**Big San Juan Mining Company (The).**—President, Alva Mudgett; secretary and treasurer, D. W. Sisson; general manager, L. G. Laraue—all New York City; office 16 Exchange Place, New York; owns five locations, the principal of which is the Mohawk lode, 300x1500 feet; situated on the south slope of Silver Mountain, one and one-half miles north-east of Ophir, Iron Springs district, and patented in 1883; vein a fissure twenty feet wide, pay streak from four to ten inches, and averaging six inches, containing galena and sulphurets in a porphyry gangue, milling, when sorted, twenty per cent lead and 100 ounces silver per ton; developed by a drift 150 feet long and a shaft 100 feet deep, with a thirty-foot drift from the bottom; output twenty-five tons; and the other four on the same vein, on which the Company is doing development work, and all showing fairly.

**Big Sherman Group.**—Three claims, 300x1500 feet each, viz.: Big Sherman, Liberty, and Independence; situated on the north side of the San Miguel River, six miles west of San Miguel City, Upper San Miguel district; located in November, 1882; owners G. W. McGraw and G. W. Donaldson, both San Miguel City; vein a horizontal contact fifty feet thick, containing gold and silver bearing sandstone, which mills from $10 to $15 per ton; developed by one tunnel twenty feet long and two ten-foot open cuts.

**Black Crook and I. O. U.**—Two claims, 300x1500 feet each; situated in Marshall Basin, two miles north-east of Telluride, Upper San Miguel district; located in May, 1881; owners H. D. McGillvray and J. H. Haynes, both Telluride; vein a fissure four feet wide, pay streak twenty-two inches of gold and silver bearing quartz, assaying $35 per ton; developed by one thirty-foot tunnel and two ten-foot open cuts.

**Black Warrior and Great Mogul.**—Two claims, 300x1500 feet; situated on the south fork of Turkey Creek, three and one-half miles north-east of Ames, Upper San Miguel district; located in 1879; owners Fred. C. Sherwin, Peter Houghton, and B. W. Thayer, all Silverton; veins both fissures varying in width, and containing quartz, galena, and gray copper, assaying forty per cent lead and 100 ounces silver per ton; developed by a tunnel thirty feet long.

**Black Wonder.**—300x1500 feet; situated on the west side of Bear Creek, four miles south-east of Telluride, Upper San Miguel district; located in July, 1880; owners L. R. Blake, Telluride, and E. L. Davis, Rico; vein a fissure five feet wide, pay streak thirty inches, containing gold and silver bearing quartz, assaying $100 per ton; developed by one twenty-five-foot tunnel.

**Bo-Peep.**—300x1500 feet; situated in Ingram Basin, three and one-half miles east of Telluride, Upper San Miguel district; located in July, 1880; owners J. H. Bishop and J. Leonard, both Telluride; vein a fissure four feet wide, pay streak twenty-four inches, containing galena and gray copper in quartz, assaying $40 per ton; developed by one twelve-foot shaft and one ten-foot-face cut.

**Bodie.**—300x1500 feet; situated on the Howard Fork of the San Miguel River, one-quarter mile west of Ames, Iron Springs district; located in June, 1882; owners Wm. H. Bodenhamer and C. F. McFarland, both Durango; vein a fissure two and one-half feet wide, pay streak two inches, containing galena and quartz, assaying twenty-five ounces silver per ton; developments—one twelve-foot face cut.

**Bonnie Bess.**—300x1500 feet; situated in Marshall Basin, two miles north-east of Telluride, Upper San Miguel district; located in 1879; owners Charles Morris, Rico, and Munn Bros., Ouray; vein a fissure, six feet wide, pay streak twelve inches, containing gold and silver bearing quartz, assaying $21 perton; developed by one thirty-foot tunnel and one eighteen-foot open cut.

**Boomerang.**—300x1500 feet; situated on the south side of the San Miguel River, three-quarters of a mile south of San Miguel City, Upper San Miguel district; located in September, 1876, and in process of patent; owners Thomas Lowthian and Charles H. Toll, both Denver, and William H. Gifford, Syracuse, N. Y.; vein a contact of undetermined thickness, one forty-foot drift showing galena and lead carbonates in a decomposed gangue, on all sides, milling, when sorted, $45 per ton, and open cuts showing the vein for a distance of 400 feet.

**Boston and Ophir Smelting Company (The).**—Incorporated under the laws of Colorado, in January, 1881; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, L. B. Russell, Boston; treasurer and general manager, E. J. Warner, Ames; offices 96½ Summer street, Boston, and at Ames; owns a smelting-works, situated at Ames, consisting of three buildings, the first 86x50 feet, containing two Blake Crushers, Cornish Rolls, one forty-horse-power engine, and two twenty-horse-power boilers; the second 80x30 feet, containing ——— Roasters; and the third 18x26 feet, with a wing 16x20 feet, is an office and laboratory; capacity sixty tons per day (twenty-four hours).



**Bradley.**—(See Ouray Mining Company.)

**Bridal-veil Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; general manager, L. G. Laraue, New York City; offices 16 Exchange Place, New York, and at Ophir; owns four claims, 300x1500 feet each, viz., Lewis, Brown Bear, Black Bear, and Our Fritz; situated in West Bridal-veil Basin, seven miles south-east of Telluride, Upper San Miguel district; the first located in March, 1881, and the others in July, 1878; veins all fissures, from three to nine feet wide, pay streaks from eight to twenty-four inches, containing galena, gray copper, and zinc blende, in a quartz gangue, milling, when sorted, 125 ounces silver per ton; developed by one tunnel forty feet long, one shaft seventy-five feet deep, one drift 150 feet long, and two adits with twenty-foot faces each; output 150 tons.

**British King.**—300x1500 feet; situated in Bridal-veil Basin, three miles south-east of Telluride, Upper San Miguel district; located in July, 1882; owner F. M. Dunlap, Telluride; vein a fissure five feet wide, containing thirty inches of quartz, with galena; developed by an open cut with a ten-foot face.

**Brittle Silver.**—300x1500 feet; situated on Sheep Mountain Peak, four and one-half miles east of Trout Lake, Trout Lake district, and located in July, 1881; owners H. J. Caldwell and Hiram Heath, both Rico; vein a fissure forty inches wide, pay streak from three to seven inches, containing quartz, galena, and gray and yellow copper, assaying 150 ounces silver per ton; developed by one fifteen-foot open cut.

**Brooklyn and San Miguel Mining and Reduction Company (The).**—Incorporated under the laws of New York, March 8, 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, W. S. Woodward; vice-president, Wm. Coverly; secretary, C. C. Savage; treasurer, F. Washburne—all Brooklyn, N. Y.; manager and superintendent, Geo. S. Andrews, Telluride, Colo.; offices 18 Wall street, New York City, and Telluride; owns N. W. H. Jr. (on the Big Elephant vein), 300x1500 feet; situated on the Savage fork of Marshall Creek, four and one-half miles north-east of Telluride, Upper San Miguel district; located in July, 1878, and patented in February, 1883; vein a fissure from nine to twelve feet wide, pay streak twenty inches, containing gold and silver bearing quartz, milling, when sorted, $40 gold and $20 silver per ton; developed by 300 feet of tunneling, one shaft 116 feet deep, and a cross-cut 194 feet long, making total workings of 610 feet, all for development purposes, no stoping having been done; and owns the St. James placer, situated on the San Miguel River, three-fourths mile east of Telluride, Upper San Miguel district, and located in August, 1881; developed by two shafts twenty-two and forty-two feet deep, and 240 feet of ditching; on which is erected a concentrator and stamp-mill (built by Fraser & Chalmers, Chicago), containing ten 750-pound Stamps, Blake Crusher, and Frue Vanners, motive power supplied by a sixty-horse-power engine and two thirty-five-horse-power boilers.

**Brookside.**—300x1500 feet; situated near the mouth of Bridal-veil Basin, two miles south-east of Pandora, Upper San Miguel district, and located in October, 1881; owners W. F. Johnson, Pandora, Walter Overton, Edward W. Lape, and Thos. Mahew, all Newport, Ky.; vein a fissure from one to six feet wide, pay streak six inches, containing galena, gray copper, and quartz, assaying from $150 to $200 per ton; developed by one ten-foot tunnel and one forty-foot open cut.

**Buckley.**—300x1500 feet; situated on the east side of Summit Creek, six miles west of San Miguel City, Upper San Miguel district; located in April, 1882; owners W. R. Mesick, W. W. Remine, and M. W. Buckley, all San Miguel City; vein a fissure twelve feet wide, containing galena and lead carbonates in a decomposed gangue, assaying fifty ounces silver per ton; developed by a tunnel 100 feet long and a fifteen-foot cross-cut.

**Butler.**—(See Middlesex Mining Company.)

**Cambridge City.**—300x1500 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in February, 1883; owners Henry Bullock, Wm. Chisholm, Austin Rowe, and Quinton Durwin, all Telluride; vein a fissure eight feet wide, pay streak eighteen inches, containing gold and silver bearing quartz, assaying $60 per ton; developed by one shaft ten feet deep.

**Caribou.**—(See American Midland Mining Company.)

**Castille.**—300x1500 feet; situated at the head of Mill or Park Creek, four miles north of Telluride, Upper San Miguel district; located in June, 1881; owners D. Overstreet, Telluride, and Jno. C. Vorhees, Grand Junction; vein a fissure two feet wide, pay streak nine inches, containing galena, gray copper, and silver glance, assaying $75 per ton, in a quartz gangue; developed by one twenty-five-foot shaft and one thirty-foot drift.

**Celina Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in February, 1883; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; owns La Crosse and Lucelia, two claims 300x1500 feet each; situated on the south-east slope of Ballard Mountain, two and one-half miles south-east of Telluride, Upper San Miguel district; located in August, 1882, and 1879; veins both fissures, four and five feet wide, pay streaks fourteen and twenty-six inches, respectively, containing gold-bearing quartz, assaying $80 per ton the former and $30 per ton on the latter; developed by two open cuts ten and twenty-five feet long.

**Celtic and Falcon Group.**—Four claims, 300x1500 feet each, viz., Celtic, Falcon, Silver View, and Twin; situated on the south slope of Silver Mountain, two miles west of Ophir, Iron Springs district; located in June, 1882; owners Maurice Lonergan, Frank Spillman, and Jasper Woman, all Ames; veins all fissures, from four to six feet wide, containing galena and gray copper in quartz carrying gold, assaying two ounces gold and fifty ounces silver per ton; developed by four open cuts, one on each lode, with ten-foot faces.

**Champion.**—(See Consort and Champion.)

**Champion.**—(On Big Elephant vein); 300x1500 feet; situated in Ingram Basin, five miles east of Telluride, Upper San Miguel district; located in June, 1879; owners Geo. S. Andrus, J. P. Redick, and Angus McDonald, all Telluride, and C. C. Savage, Brooklyn, N. Y.; vein a fissure, from eight to ten feet wide, containing quartz carrying silver and assaying $30 per ton across the entire breast of the tunnel, 125 feet long, by which the property is developed.



**Charles Sherman.**—300x1500 feet; situated on the west side of Bear Creek, two miles from Telluride, Upper San Miguel district; located in Aug., 1880; owners O. C. Thomas and L. G. Denison, both Telluride, J. A. Hursh, Springfield, Mo., and C. H. Harter, Niles, Mich.; vein a fissure, four feet wide, pay streak fifteen inches, containing gold-bearing quartz, assaying $75 per ton; developments—one thirty-foot tunnel.

**Chicago Bar.**—(Placer); covering 160 acres; situated on the Lower San Miguel River, four miles west of Placerville; located in 1877; owned by J. P. Redick and Angus McDonald, both Telluride, J. M. Stoner, Silverton, and the Keokuk Hydraulic Placer Mining Company (see Keokuk Hydraulic Placer Mining Company).

**Chieftain.**—(On Cimarron vein); 300x1500 feet; situated in Ingram Basin, five miles east of Telluride, Upper San Miguel district; located in August, 1881; owners Geo. S. Andrus, J. P. Redick, and Angus McDonald, all Telluride, and C. C. Savage, Brooklyn, N. Y.; vein a fissure, six feet wide, containing silver-bearing quartz; developed by the Champion tunnel, which vein it crosses.

**Chipmunk.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in 1881; owners J. C. Brown, C. M. Carrier, and Henry D. Martin, all Telluride; vein a fissure, twenty inches wide, pay streak five inches, containing galena and gray copper in quartz; developed by two open cuts fifteen and twenty feet long.

**Chicago.**—300x1500 feet; situated on the north slope of Yellow Mountain, one mile south-east of Ames, Iron Springs district; located in January, 1883; owner A. E. Turner, San Miguel City; vein a fissure, six feet wide, pay streak twenty inches, containing gold and silver quartz and gray copper, assaying $45 per ton; developed by one twenty-foot shaft and one twelve-foot face open cut.

**Cimarron.**—(See Ouray Mining Company.)

**Cincinnati.**—(On the Big Elephant vein); 300x1500 feet; situated in Marshall Basin, five miles east of Telluride, Upper San Miguel district; located in September, 1878, and patented in September, 1882; owners Jno. W. Strayer, Ouray, Ed. Henry and D. N. Clark, both Telluride; vein a fissure, eight feet wide, pay streak from ten to twenty-four inches, containing gold and silver bearing quartz, assaying an average of $75 per ton; developed by two shafts eighteen and twenty feet deep.

**Cliff.**—300x1500 feet; situated on the east slope of San Miguel Mountain, one mile south of Pandora, Upper San Miguel district; located in August, 1881; owners W. F. and C. D. Johnson, both Pandora; vein a fissure, from three to six feet wide, with two pay streaks eight and five inches wide, containing gold quartz, assaying $125 per ton; developed by two eighteen-foot open cuts and one ten-foot tunnel.

**Cliff.**—300x1500 feet; situated on the north slope of Yellow Mountain, two miles west of Ophir, Iron Springs district; located in April, 1881; owners F. P. Mogenson and Geo. Priest, both Ophir; vein a fissure four feet wide, containing gold-bearing quartz; developed by one twenty-foot shaft.

**Climax and Lone Star.**—Two claims, 300x1500 feet each; situated in Bridal-veil Basin, four miles south-east of Telluride, Upper San Miguel district; located in 1882; owners H. H. Corbin, A. F. Litchfield, and

Jno. Steele, all Telluride, and Leo H. De Lange, Philadelphia, Pa.; veins both fissures, varying in width, pay streaks five inches, containing gold-bearing quartz, assaying $10 per ton; developed by two shafts fifteen feet deep each.

**Climax and Verona Group.**—Four claims, 300x1500 feet each, viz.: Climax, Verona, Louisa, and Pioneer; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in 1880-81; owners G. I. Coleman, E. S. Orr, and A. W. Snyder, all Telluride; veins all fissures, from three to six feet wide, pay streaks from six to twenty-four inches, containing galena and gray copper in quartz, carrying gold, the galena and gray copper in the Verona assaying forty ounces silver per ton and the quartz $5 per ton; developed by two tunnels thirty feet long each and two shafts fifteen feet deep each.

**Clipper.**—(North-east extension of Powhattan); 300x1500 feet; situated on the south slope of Silver Mountain, one-half mile east of north from Ophir, Iron Springs district; located in April, 1878; owners M. J. Alkire, Ophir, and Mrs. Jennie Meek, Fontonelle, Ia.; vein a fissure twenty feet wide, pay streak twenty-four inches, containing gold and silver bearing quartz similar in character to Powhattan ore; developed by three open cuts with fifteen-foot faces each, one thirty-foot shaft, and one tunnel fifty feet long, designed to cut veins thirty feet deep.

**Colorado Central.**—300x1500 feet; situated on the south slope of Silver Mountain, one-half mile north-east of Ophir, Iron Springs district; located in October, 1877; owners L. G. Laraue, New York City, and Frank La May, Ophir; vein a fissure fifteen inches wide, pay streak four inches, containing copper pyrites and galenain quartz, milling, when sorted, one-half ounce gold and sixty ounces silver per ton; developed by one fifty-foot drift and one fifty-foot shaft.

**Colorado and Capitan.**—Two claims, 300x1500 feet each; situated on the north slope of Yellow Mountain, one and one-half miles south-west of Ophir, Iron Springs district; located in 1878; owners G. H. Ribble and R. E. Lawder, both Mexico, Mo.; veins both fissures, three and five feet wide, respectively, containing galena, gray copper, and sulphurets, in quartz, carrying gold, milling, when sorted, $25 per ton; developed by three tunnels, 100, 80, and 168 feet long, and two shafts 150 and 10 feet deep, and one ten-foot drift, with some other workings.

**Columbia and Erin's Hope.**—Two adjoining claims on the same vein (the Madison), 300x1500 feet each; situated in Marshall Basin; owned by J. W. Carpenter and P. H. Anderson, both Ouray; vein a fissure, varying in width, with a pay streak and ore similar in character to the Madison; developments—one thirty-five-foot shaft on the former and one thirty-foot open cut on the latter.

**Comet.**—300x1500 feet; situated on the north side of the San Miguel River, one-half mile west of San Miguel City, Upper San Miguel district; located in February, 1883; owners R. F. Dunning and Morris Thompson, both San Miguel City; vein a horizontal contact fifty feet thick, composed of gold and silver bearing sandstone, easily treated, milling from $6 to $8 per ton; developed by one fifteen-foot-face open out.

**Confidence and U. P.**—Two claims, 300x1500 feet each; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district, and located in 1877 and 1882; owners J. C. Rutan and W. M. Leeson, both San Miguel City, and A. G. Sherman and R. E. Markham, both Chicago; veins both fissures, four feet wide each, pay streaks from



twelve to fifteen inches, containing gold and silver bearing quartz, milling, when sorted, $55 per ton; developed by one tunnel twenty-five feet long and two open cuts twenty-five and thirty feet long.

**Consort and Champion.**—Two adjoining claims on the same vein, 300x1500 feet each; situated in Bridal-veil Basin, five miles south-east of Telluride, Upper San Miguel district, and located in June, 1881; owners L. R. Blake and John Glesner, both Telluride, and Geo. Wetherby, Illinois; vein a fissure four feet wide, pay streak thirty inches, containing gold and silver bearing quartz, assaying $60 per ton; developed by one thirty-five-foot tunnel and one twelve-foot open cut.

**Copper King.**—300x1500 feet; situated on the east slope of Yellow Mountain, one and one-half miles south of Ophir, Iron Springs district, and located in August, 1881; owner James Kernahan, Ophir; vein a fissure five feet wide, pay streak six inches, containing brittle silver and gray copper in quartz, milling, when sorted, 120 ounces silver per ton; developed by one fifteen-foot drift and one twenty-foot tunnel.

**Cora C.**—(See Golden Thread Group.)

**Cordilleras and St. Joe.**—Two claims, 300x1500 feet each; situated on the south slope of Silver Mountain, three-fourths mile north of Ophir, Iron Springs district, and located in 1877 and 1878; owners Augusta Page & Bros., Boston; vein a fissure twelve feet wide, pay streak six inches, containing bismuth silver and galena in quartz, milling, when sorted, 150 ounces silver per ton; developed by one tunnel 180 feet long and one shaft forty feet deep.

**Cornucopia.**—300x1500 feet; situated on the north slope of Sunshine Mountain, three-fourths mile south-east of Ames, Iron Springs district, and located in May, 1881; owners Jno. C. Kane, Chattanooga, Jno. Meyer, J. Blarney, and H. Weir, all Ames; vein a fissure four feet wide, pay streak twelve inches, containing galena and gray copper in quartz carrying gold, assaying $10 in gold per ton; developed by one twenty-five-foot-face cut.

**Cow Boy Group.**—Three claims, 300x1500 feet each, viz.: Cow Boy, Orphan Boy, and Ready Money; situated at the foot of Mount Wilson, sixteen miles south-west of Telluride, Lower San Miguel district; owner Dr. H. H. C. Kay and J. C. Kaler, both Telluride; veins all fissures four feet wide each, pay streaks eighteen inches, containing quartz, galena, and gray copper, assaying $80 per ton; developed by three drifts, ten, fifteen, and twenty-three feet long.

**Crescent.**—300x1500 feet; situated on the south side of Ingram Basin, four miles east of Telluride, Upper San Miguel district, and located in September, 1880; owners Jacob Ross and W. G. Morrow, both Silverton; vein a fissure ten feet wide, pay streak from eight to ten inches, containing galena and quartz, with ruby silver and black sulphurets, assaying seventy-five ounces silver per ton; developed by two drifts thirty and twenty-five feet long.

**Crescent City and Lone Star.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on Deep Creek, eight miles west of Telluride, Upper San Miguel district, and located in July, 1881; owners W. S. Matson, J. C. Barlow, M. W. Buckley, Jewett Scranton, Lafayette Felton, and A. D. Wilson, all Telluride; vein a fissure twenty feet wide, with five pay streaks aggregating from fourteen to twenty inches, containing gray and yellow copper, with some galena, in quartz, milling, when sorted, seventy-one ounces silver per ton; developed by two tunnels 225 and 75 feet long and three shafts, ten, ten, and forty feet deep on the Crescent City.

**Creve Coeur.**—300x1500 feet; situated on the north slope of Yellow Mountain, one mile west of Ophir, Iron Springs district; located in January, 1878, and in process of patent; owners Jacob Ross, Silverton, Thos. Johns, Martins, Ohio, and Jno. Turk, Belmont County, Ohio; vein a fissure eight feet wide, pay streak fifteen inches, containing galena and gray copper in quartz, milling, when sorted, $40 per ton; developed by one thirty-five-foot shaft and a cross-cut tunnel 204 feet long, with some other workings.

**Cromer Placer.**—Twenty-six acres, situated at the mouth of Bear Creek, at Telluride, Upper San Miguel district, and located in August, 1881; owner H. Pamperin, Telluride; developments—400 feet of fluming, three shafts ten feet deep each, and two fluming-boxes.

**Crown Jewel.**—300x1500 feet; situated on the north fork of Turkey Creek, two miles north of Ophir, Upper San Miguel district; located in 1876, and patented in February, 1883; owner N. S. Simpkins, New York City; manager, James Murdock, Silverton; vein a fissure three feet wide, pay streak six inches, containing galena and gray copper in quartz, milling, when sorted, forty per cent lead and 150 ounces silver per ton; developed by two tunnels 80 and 300 feet long, respectively, with some other workings; output twenty-five tons.

**Dan Rice and Jumbo.**—Two claims, 300x1500 feet each; situated in Bridal-veil Basin, five miles south-east of Telluride, Upper San Miguel district, and located in May, 1881; owners Geo. Carruthers, Corunna, Mich., S. B. Smith, Grand Rapids, Mich., C. M. Carrier, Lansing, Mich., J. C. Angel and W. D. Rice, both Telluride; vein a fissure five feet wide, containing gold-bearing quartz, assaying $35 per ton; developed by twenty feet of work on each claim.

**Daisy.**—300x1500 feet; situated on the north slope of Mt. Wilson, fifteen miles from Placerville, Lower San Miguel district, and located in September, 1882; owners A. G. Dunbar, Ouray, H. H. Hart and J. A. Ross, both Placerville; vein a fissure four feet wide of quartz, carrying sulphides of copper and gold, assaying $15 per ton; developed by one ten-foot shaft.

**Day's Length.**—300x1500 feet; situated three-fourths mile south-west of Telluride, Upper San Miguel district, and located in July, 1882; owners M. D. L. Houston, B. F. Hyde, and James Williams, all Telluride; vein a fissure eight feet wide, pay streak seventeen inches, containing galena and quartz, assaying eighteen ounces silver per ton; developed by one fourteen-foot tunnel.

**De Luce Placer.**—160 acres adjoining Telluride on the north, Upper San Miguel district; located in 1876; owners W. H. Trout and E. N. McClain, both Telluride, Geo. B. Lake, Topeka, Kas., Becker Folsom, J. S. Kerr, and D. H. Ehman, all McPherson, Kas., and J. H. Haverly, Chicago; production probably four cents per cubic yard; developments—$600 worth of ditching.

**Deadwood.**—300x1500 feet; situated on the north slope of Yellow Mountain, one-half mile east of Ophir, Iron Springs district; located in July, 1881; owners Frank Smith, Thomas Clingan, and Simon Multhaupt, all Ophir, and Milton Armstrong, Placerville; vein a fissure two feet wide, pay streak from eight to ten inches, containing galena, gray copper, and quartz, assaying thirty per cent lead, some gold, and eighty ounces silver per ton; developed by one cross-cut 100 feet long, one shaft thirty-five feet deep, and one tunnel sixty feet long.



**Deadwood Extension.**—300x1340 feet; situated on the north slope of Yellow Mountain, one-half mile east of Ophir, Iron Springs district; located in August, 1881; owner Thos. Clingan, Ophir; vein a fissure three feet wide, pay streak eight inches, containing galena and quartz, assaying thirty per cent lead and fifty ounces silver per ton; developed by one thirty-foot shaft and one cross-cut 140 feet long.

**Dealia Placer.**—Eighty acres; situated on the south side of the San Miguel River, one-half mile south of Telluride, Upper San Miguel district; located in August, 1881; owners Henry Abbott and Oliver Winner, both Telluride, T. T. Tinsley, Silver Cliff, and Wm. Abbott, Albuquerque, N. M.; developments—one twelve-foot shaft, 1,200 feet of ditching, and a cabin on the claim.

**Deep Creek Placer.**—Seventy-five acres; situated on Deep Creek, eight miles west of Telluride, Upper San Miguel district; located in June, 1882; owners S. M. Huston and E. J. Savigney, both Pandora; production probably twenty cents per cubic yard; developed by 600 feet of fluming and fifty feet of sluicing; worked by ground sluice.

**Democrat and Yellow Jacket.**—Two claims, 300x1500 feet each; situated on the south-west slope of Yellow Mountain, one-fourth mile north-east of Trout Lake, Iron Springs district; located in May, 1881; owners Battista Scigolini and G. S. Scigolini, both Trout Lake; vein a fissure twenty-six inches wide, pay streak five inches, containing galena, gray copper, and quartz, assaying one ounce gold and twenty-five ounces silver per ton; developed by one thirty-six-foot tunnel.

**Detroit City.**—(Extension of Pocahontas); 300x1500 feet; situated on the west side of Bear Creek, four miles south-east of Telluride, Upper San Miguel district; located in June, 1880; owners C. M. Robinson, Red Mountain Town, Chas. S. Watson, Telluride, and W. C. J. Cmpaeau, Detroit, Mich.; vein a fissure, four feet wide, pay streak from eight to ten inches, containing decomposed matter, assaying $20 per ton in gold; developed by an open cut and drift thirty feet long, ten feet of which is under cover.

**Dixie.**—300x1500 feet; situated on the north slope of Silver Mountain, two miles north of Ophir, Iron Springs district; located in September, 1877; owners E. D. Silsby, Ophir, Fred. C. Sherwin, Silverton, and Henry Kingsmill, London, Eng.; vein a fissure, forty inches wide, pay streak from eight to twelve inches, containing galena in quartz, milling, when sorted, forty per cent lead and fifty-five ounces silver per ton; developed by two drifts forty and thirty feet long.

**Dolobran Mining Company (The).**—Incorporated under the laws of Pennsylvania, in November, 1880; capital stock $250,000, in 1,000 shares of $250 each, non-assessable; president, Samuel R. Shipley; secretary and treasurer, David Scull, Jr.—both Philadelphia; general manager, Samuel Alsop, Colorado Springs; superintendent, Thos. Sharpless, Telluride; offices with Provident Life and Trust Co., Philadelphia, and Telluride; owns three claims, 300x1500 feet each, viz., Union (extension of the Smuggler), Pioneer (extension of the Bradley), and Revenue; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district; located in June, 1876; veins all fissures, from four to ten feet wide, and in the Union from four to six feet, pay streak from ten to twenty-eight inches, containing mineral similar to the Smuggler ore, viz., native silver and the ores of silver, including ruby and brittle silver and silver glance, associated with iron and copper pyrites, and some galena and zinc blende, in a quartz gangue, milling, when sorted, from 100 to 300 ounces silver, the entire pay streak probably averaging

fifty ounces silver and some gold per ton; developments—800 feet of tunnels, drifts, and shafts; pay streaks in the others from three to fifty inches, the Revenue containing galena and gray copper, with some ruby and native silver, in a quartz gangue, assaying forty-five ounces silver per ton, and the Pioneer a gold-bearing ore somewhat similar to the Cimarron, which assays $25 per ton; developments on the two claims consisting of 200 feet of tunnels, drifts, and shafts.

**Dora Belle.**—300x1500 feet; situated on the north side of the San Miguel River, six and one-half miles west of San Miguel City, Upper San Miguel district; located in February, 1883; owner Geo. W. Donaldson, San Miguel City; vein a fissure ten feet wide, pay streak ten inches, containing galena in quartz; developed by one ten-foot-face cut.

**Duchess.**—(See Gold King Mining Company.)

**Duquesne Mining Company (The).**—Incorporated under the laws of Colorado, August 29, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Wm. J. Hammond, Pittsburgh; vice-president, O. P. Posey, Silverton; treasurer, Wm. McKay; secretary and general manager, George Crawford—both Pittsburgh; office Duquesne Way and Eleventh street, Pittsburgh, and at Silverton; owns Tip-top (extension of Summit) and Lookout, two claims, 300x1500 feet each; situated on the south slope and top of Silver Mountain, two miles north-west of Ophir, Iron Springs district; located in 1874, and patented in 1883; veins both fissures six feet wide each, pay streaks from six to eight inches, containing galena in a quartz gangue, milling, when sorted, thirty-four per cent lead and thirty-nine ounces silver per ton; developed by one level 300 feet long, one shaft fifty feet deep, and a cross-cut is now being driven; output for 1882 160 tons, producing 6,400 ounces silver and 115,200 pounds lead, after close sorting.

**Eclipse Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $50,000, in 5,000 shares of $10 each, non-assessable; president, P. R. Gray; vice-president, R. Richardson; secretary, R. W. Redfield; treasurer, H. M. Hughes—all Franklin, Pa.; superintendent, J. R. Grant, Telluride; offices Franklin, Pa., and Telluride; owns five adjoining claims on the same vein, 300x1500 feet each, viz.: Ajax, Bobtail, Nero, Park View, and Union Flag; situated on the divide between Marshall and Ingram Basins, four miles east of Telluride, Upper San Miguel district; located in 1878, and patented in 1883; vein a fissure five feet wide, pay streak from eight to eighteen inches, containing galena, gray copper, and quartz, carrying gold, the galena and gray copper milling, when sorted, thirty ounces silver and the quartz $175 per ton; developed by three tunnels, 300, 100, and 40 feet long; and also three shafts thirty feet deep each; and owns four mill sites, five acres each, adjoining the lode claims; located and patented at the same time.

**Elk.**—300x1500 feet; situated on the west slope of Yellow Mountain, four miles south-west of Ophir, Iron Springs district; located in October, 1879; owner Peter Peterson, Ophir; vein a fissure four feet wide, pay streak from ten to twelve inches, containing quartz, galena, and gray copper, assaying 100 ounces silver per ton; developed by one tunnel thirty-five feet long.

**Elk Creek Placers.**—Four claims, covering 160 acres each, viz.: Elk Creek, Corunna, Angie, and Little Harry; situated on Elk Creek, sixteen miles south-west of Telluride, Lower San Miguel district; located in August, 1882; owners Dr. H. H. C. Kay, A. T. Nichols, and L. G. Wheeler, all Telluride; developed by one open cut 180 feet long and thirty feet wide, 500 feet of ditching, and 175 feet of sluicing.



**Emerald.**—(On the Virginius vein); 300x1500 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in August, 1875, and in process of patent; owners F. J. Kramer and Jno. Beal, both Ophir, and John Fallon, Chicago; vein a fissure, twelve feet wide, pay streak fifteen inches, containing galena and gray copper in quartz, milling, when sorted, forty per cent lead and thirty-five ounces silver per ton; developed by one fifteen-foot-face open cut and by means of the cross-cut on the Seventy-six mine, which is 150 feet long.

**Emily.**—300x1500 feet; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district; located in November, 1882; owners D. C. Hartwell and others, Ouray; vein a fissure, varying in width, pay streak twenty inches, containing gold, silver, and copper; developments consisting of one tunnel showing a fair material.

**Empire.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north of Ophir, Iron Springs district; located in 1880, and patented in 1882; owners Harry B. Adsit, Silverton, and E. D. Barnes, New York City; vein a fissure, five feet wide, pay streak twelve inches, containing galena in quartz, milling sixty-two per cent lead and sixty-four ounces silver per ton; developed by one shaft twenty feet deep, one level forty feet long, and one tunnel 400 feet long, cutting the vein 400 feet deep; output fifty tons, and it is estimated that 200 tons of ore are now in sight.

**Erin's Hope.**—(See Columbia and Erin's Hope.)

**Euclid Avenue.**—300x1500 feet; situated on the east side of Bear Creek, three miles south of Telluride, Upper San Miguel district; located in August, 1879; owners the Upper San Miguel Gold and Silver Mining Company, and James M. Ohlhausen, Rico; vein a fissure, four feet wide, pay streak twelve inches, containing gold-bearing quartz, milling, when sorted, $75 per ton in gold and silver; developed by three levels, 130, 68, and 40 feet long.

**Eureka Group.**—Three placers, twenty acres each, viz., Eureka, Occidental, and Toland; situated on the south fork of Turkey Creek, seven miles south-west of Telluride, Upper San Miguel district; located in July, 1882; owners G. W. Belt and F. Toland, both Telluride; developed by 200 feet of fluming, one and one-half miles of ditching from two and one-half to ten feet in depth, and showing fairly.

**Evans Mining and Milling Company (The).**—Incorporated under the laws of West Virginia, in August, 1880; capital stock $100,000, in 100,000 shares of $1 each, non-assessable; president, Chas. H. Jordan, Wakefield, Mass.; secretary and treasurer, Wm. Spalding, Boston; managers, Mark Folsom and Milton Evans, both Ames; offices at National Bank of Redemption, Boston, and Ames, Colo.; owns two claims, 300x1500 feet each, viz., Nevada and Little Emma; situated on the north slope of Yellow Mountain, one and one-fourth miles south-east of Ophir, Iron Springs district; located in 1876, and patented in 1882; vein a fissure four feet wide, pay streak from ten to twenty-two inches, containing galena and gray copper in quartz, carrying gold, the galena and gray copper milling, when sorted, $200 per ton, and the quartz one ounce gold and twenty ounces silver per ton; developments—two cross-cut tunnels 400 and 250 feet long and two drifts 360 and 350 feet long, respectively, connected by an eighty-one-foot winze, the former running from the last mentioned tunnel, and some other workings; improvements—two boarding-houses and other buildings; output 500 tons.

**Exodus.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north of Ophir, Iron Springs district, and located in 1877; vein

a fissure two feet wide, containing gold quartz, milling, when sorted, $10 per ton; developed by one twenty-foot cross-cut tunnel and one fifteen-foot shaft.

**Expert, Old Abe, and St. Patrick.**—Three claims, 300x1500 feet each; situated in Bridal-veil Basin, two miles south-east of Telluride, Upper San Miguel district, and located in May, 1879; owners Aaron Jones and Mark Folsom, both Ames, James Kernahan, Ophir, and Geo. H. Towle, Boston; veins all fissures, from four to six feet wide, pay streaks from ten to twelve inches, containing gray copper, galena, and quartz, assaying sixty ounces silver per ton; developed by two shafts seventeen feet deep each and one tunnel thirty-five feet long.

**Exposition.**—300x1500 feet; situated on the west slope of Mt. Wilson, at the head of Bilk Creek, three miles south of Ames, Iron Springs district, and located in August, 1882; owners Chas. S. Kelly and P. T. Sheahan, both Rico; vein a fissure three feet wide, pay streak ten inches, containing gold and silver bearing quartz, assaying $35 per ton; developed by one ten-foot-face cut.

**Fairview.**—300x1500 feet; situated on the west side of Bear Creek two and one half miles south of Telluride, Upper San Miguel district, and located in July, 1877; owners Geo. N. Hyde and A. B. Cooper, both Telluride, E. L. Davis, Rico, and Jacob Menderson, Cincinnati, Ohio; vein a fissure two feet wide, containing gold-bearing quartz, milling, when sorted, $40 per ton; developed by one tunnel eighty feet long.

**Falcon.**—(See Celtic and Falcon Group.)

**Fannie Forest.**—300x1500 feet; situated on the east side of Bear Creek, two and one-half miles south of Telluride, Upper San Miguel district, and located in August, 1882; owner Dr. H. H. C. Kay, Telluride; vein a fissure three feet wide, pay streak, six inches, containing quartz carrying gold and galena, assaying $50 per ton; developed by one fifteen-foot tunnel.

**Flora.**—300x1500 feet; situated in Savage Basin, five miles east of Telluride, Upper San Miguel district; located in September, 1877, and patented in 1883; owners Thomas Thomas and Thomas E. James, both San Miguel City; vein a fissure four feet wide, pay streak fourteen inches, containing gold-bearing quartz and some tellurium, milling, when sorted, 250 ounces silver and one and one-half ounces gold per ton; developed by two shafts twenty-five and fifteen feet deep and one open cut and tunnel thirty-five feet long.

**Florence, Caroline, and Pond Placers.**—Covering eighty, eighty, and forty acres; situated on the San Miguel River, between the Keystone property and San Miguel City, Upper San Miguel district, and located in 1881; owners W. R. Mesick and W. W. Remine, both San Miguel City; production probably twenty-eight cents per cubic yard; developments—from one-half to three-fourths mile of ditching and 100 feet of sluicing; improvements—one house.

**Forest Queen.**—Owned by J. M. and Floyd Holley, both Telluride; claim 300x1500 feet; situated on the east slope of Yellow Mountain, one-half mile south of Ophir, Iron Springs district, and located in June, 1882; vein is a fissure thirty feet wide, pay streak eighteen inches, containing quartz and gray copper, assaying 150 ounces silver per ton; developed by a level thirty feet long.

**Fortuna.**—(On the Big Elephant vein); situated in Middle Basin, four miles north-east of Telluride, Upper San Miguel district, and patented in February, 1883; owners David Geiger, Ouray, and the Emma Mountain Mining Company; vein a fissure six feet wide, pay streak from twenty to twenty-five inches, containing galena, copper pyrites, and quartz, milling, when sorted, 100 ounces silver per ton; developed by one thirty-foot open cut and one twenty-foot tunnel.



**Fox and Kent.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north-east slope of St. Bernard Mountain, one mile south of Ames, Iron Springs district, and located in June, 1878; owners J. C. Rutan, San Miguel City, Jas. M. Fox and J. L. Roberts, both Ames, and Jacob Woodburn, Minneapolis, Minn.; vein a fissure four feet wide, pay streak eighteen inches, containing galena, gray copper, and quartz, assaying from 25 to 100 ounces silver per ton; developed by two tunnels fifty and thirty-five feet long, and two shafts twenty and forty feet deep.

**Francis.**—300x1500 feet; situated on the south fork of Turkey Creek, three miles north-west of Ophir, Upper San Miguel district, and located in May, 1881; owners A. H. Goddard and Wm. Kennedy, both Ophir, Sam'l Johnson, Ouray, and Sam'l H. Twigg, Red Mountain Town; vein a fissure four feet wide, pay streak from fifteen to twenty inches of gold quartz, carrying some silver, and milling, when sorted, from $50 to $75 per ton; developed by one twenty-five-foot drift.

**Garibaldi.**—300x1500 feet; situated on the south-east slope of St. Bernard Mountain, one-half mile west of Trout Lake, Iron Springs district; located in May, 1881; owners A. Gorla, St. Louis, and Gust. C. Giamboni, Trout Lake; vein a fissure four feet wide, pay streak from six to twelve inches, containing gray copper and galena in a quartz gangue, milling, when sorted, $100 per ton; developed by three levels, 135, 300, and 10 feet long, and some other workings, with some improvements.

**Georgia Placer.**—Eighty acres; situated on the south side of the San Miguel River one-half mile west of San Miguel City, Upper San Miguel district; located in September, 1882; owners N. N. Pond, Buckley Lynds, Thomas Thomas, and J. P. Dunlap, all San Miguel City; developed by one twelve-foot shaft and fifty feet of ditching.

**Germania.**—300x1500 feet; situated on Sheep Mountain Peak, four and one-half miles east of Trout Lake, Trout Lake district; located in October, 1881; owners Henry Schwenk, Jacob Bader, and Christ. Trostel, all Rico; vein a fissure five feet wide, pay streak twenty-eight inches, containing galena, gray copper, iron, and quartz, assaying thirty-five ounces silver per ton; developed by one tunnel twenty-eight feet long.

**Gibraltar and Gibraltar No. 2.**—Two claims, 300x1500 feet each; situated on the west fork of Bear Creek, three miles south of Telluride, Upper San Miguel district; located in August, 1882; owner Dr. H. H. C. Kay, Telluride; vein a fissure, containing six feet of quartz, carrying gold and galena, assaying $100 per ton; developed, respectively, by an open cut 100 feet long and a ten-foot adit.

**Gilded Age Placer.**—Sixty acres; situated on the east side of the Howard fork of the San Miguel River, one mile north of Ames, Iron Springs district; located in July, 1882, and in process of patent; owners W. H. Wheeler, Alex. McCaw, and C. C. Conklin, all Ames; within the boundaries of which is a lode claim of the same name and with the same owners and date of location, 300x1500 feet, containing an ore body apparently a deposit; developments—one forty-two-foot shaft and five open cuts with ten-foot faces each, all showing mineralized matter carrying large pockets of galena and gray copper, milling fifty per cent lead and 150 ounces silver per ton.

**Giaour.**—300x1500 feet; situated on the north side of the San Miguel River, sixteen miles west of Telluride, Lower San Miguel district; located in September, 1882; owner Dr. H. H. C. Kay, Telluride; vein a fissure six feet wide, pay streak from twelve to fifteen inches of gold quartz, assaying $100 per ton; developed by one ten-foot-face cut.

**Globe.**—(See Atlas, Globe, and Suffolk.)

**Gold and Silver Chief and Hyacinth.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the south slope of Mount Sophia, at the head of Cornet Creek, two and one-half miles north of Telluride, Upper San Miguel district; located in 1876, and in process of patent; owners Chas. H. Toll, Denver, and Frank Hiscock and W. H. Gifford, both Syracuse, N. Y.: vein a fissure twelve feet wide, pay streak from twelve to eighteen inches, containing gold and silver bearing quartz; developed by one cross-cut tunnel 142 feet long, with a drift from end of tunnel 225 feet long, and one shaft forty feet deep, the latter showing mineral milling an average of $60 per ton.

**Gold Bug and McGinnis.**—Two claims, 300x1500 feet each; situated in Marshall Basin, two miles north-east of Telluride, Upper San Miguel district, and located in 1881; owners Bernard Mallon, James Welsh, and James Burns, all Lake City; vein a fissure from twenty to thirty inches wide of quartz carrying gold and silver, and assaying from $100 to $500 per ton; developed by one forty-five-foot shaft.

**Gold Check and Monitor.**—Two claims, 300x1500 feet each; situated on the south fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district, and located in July, 1879; owners Michael Dowd and John Gordon, both Ames; vein a fissure four feet wide, pay streak from ten to fifteen inches, containing gold-bearing quartz, milling $30 per ton; developed by one shaft thirty-five feet deep and one open cut with an eighteen-foot face.

**Gold King Mining Company (The).**—Incorporated under the laws of Ohio, in February, 1883; manager, Jonathan Warner; superintendent, W. R. Vanderveer—both Ames; owns three claims, 300x1500 feet each, viz., Gold King and Gold King Extension; situated on the south fork of Turkey Creek, four miles north-east of Ames, Upper San Miguel district, and located in 1877 and 1881, respectively; vein a fissure twenty inches wide, containing gold-bearing quartz (free-milling), yielding $24 per ton; developed by six levels, 455, 325, 210, 135, 90, and 145 feet long, connected by a 325-foot winze, with some other workings, on the former, and one twenty-foot-face cut and one twenty-foot shaft on the latter; improvements—ore-houses and other buildings; output 2,500 tons; and the Duchess, situated on the south fork of Turkey Creek, three and one-half miles north-east of Ames, Upper San Miguel district; vein a fissure four feet wide, pay streak fifteen inches, containing gold-bearing quartz, assaying $16 per ton; developed by an open cut with a ten-foot face and one fifteen-foot tunnel.

Also owns a stamp-mill (built by Fraser & Chalmers, Chicago), situated on a mill site adjoining the mines, and consisting of three buildings, 30x40, 20x40, and 20x40 feet, containing Blake Crusher, ten Stamps, with four amalgamating-pans, etc.; motive power supplied by a thirty-horse-power engine and two thirty-horse-power boilers; and a Halliday Tram-way 2,750 feet long connects the mines with the mill.

**Gold Run Placer Mining Company (The).**—Incorporated under the laws of Kentucky, in December, 1881; capital stock $1,000,000, in 20,000 shares of $50 each, non-assessable; president, Robt. Waring; vice-president, Wm. H. Lape; secretary, Wm. H. Wallinford; treasurer, Thos. B. Youtcey—all Newport, Ky.; agent, Geo. R. Todd, Ouray; offices Newport, Ky., and Ouray; owns the Gold Run Placer, 160 acres; situated in Gold Run Valley, extending from one-fourth mile east of Telluride to the head of the valley, Upper San Miguel district; located in July, 1876, and patented in January, 1883; developed by one mile of ditching and six shafts from twenty to thirty-five feet in depth; production probably the same as the Keystone; and owns the Big Galena lode (see Ouray County).



**Golden Chief.**—(An extension of the Suffolk); 300x1500 feet; situated on the south slope of Silver Mountain, one-half mile north-west of Ophir, Iron Springs district; located in July, 1879; owners E. D. Silsby and M. J. Alkire, both Ophir, and C. W. Haskins, Ouray; vein a fissure three feet wide, pay streak from six to ten inches of gold-bearing quartz, milling $30 per ton; developed by one thirty-foot drift and one ten-foot shaft.

**Golden Eagle.**—300x1500 feet; situated on the south slope of Silver Mountain, one-half mile north of Ophir, Iron Springs district; located in 1879; owners J. D. Rollins, Silverton, and Herman Nieland, Ophir; vein a fissure three feet wide, containing gold-bearing quartz, assaying from $30 to $40 per ton; developments—an open cut with twenty-five-foot face.

**Golden Eagle and Lily of the West.**—Two claims, 300x1500 feet each; situated on the north slope of Yellow Mountain, one mile west of Ophir, Iron Springs district; located in June, 1881; owners Maurice and Michael Lonergan and Maurice O'Connell, all Ames; veins both fissures three feet wide each, pay streaks from two to four inches, containing gray copper and quartz, assaying from 150 to 200 ounces silver per ton; developed by two open cuts with fifteen-foot faces each.

**Golden Group.**—(See J. H. Haverly Golden Group Mining Company).

**Golden Thread Group.**—Three parallel claims, 300x1500 feet each; situated in Prospect Basin, three miles south of Telluride, Upper San Miguel district; located in April, 1882; owners Jno. C. Kane, Chattanooga, and Joseph Blamey, Ames; veins all fissures, in the Golden Thread five feet wide, pay streak twenty inches of gold quartz, assaying $35 per ton; developments—one ten-foot-face cut and a five-foot tunnel; in the Cora C. six feet wide, pay streak nine inches of gold-bearing quartz; developments—one ten-foot-face cut; and in Lily H. six feet wide, pay streak twenty inches of gold-bearing quartz; developed by one ten-foot-face cut.

**Good Hope.**—300x1500 feet, situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district; located in 1879; owners Chas. Morris, Rico, and Munn Bros., Ouray; vein a fissure forty inches wide, pay streak ten inches, containing galena and copper pyrites in quartz; developed by one tunnel twenty-eight feet long.

**Grand Central.**—300x1500 feet; situated on Marshall Creek, two miles east of Telluride, Upper San Miguel district, and located in July, 1878; owners Geo. R. Todd, Ouray, and J. P. Barlow, Gunnison City; vein a fissure ten feet wide, with two pay streaks aggregating thirty inches, containing galena, gray copper, with ruby and brittle silver and quartz, assaying from $50 to $100 per ton; developed by 100 feet of tunneling and some other workings.

**Grand Central.**—300x1500 feet; situated on Marshall Creek, three miles east of Telluride, Upper San Miguel district, and located in July, 1878; owners J. A. Goodwin, C. C. Ricker, W. H. Wright, and J. M. Haist, all Tel-

luride; vein a fissure eight feet wide, pay streak thirty inches, containing gold and silver bearing quartz and galena, milling, when sorted, $40 per ton; developed by two tunnels 360 and 20 feet long and one thirty-foot open cut; output 100 tons.

**Grand View.**—300x1500 feet; situated on the north slope of Silver Mountain, two and one-half miles north-west of Ophir, Iron Springs district, and located in 1877; owners Wm. Crim, Carrolton, Ohio, and —— Goddard, Saginaw, Mich; vein a fissure six feet wide, pay streak from five to eight inches of sulphuret ore in quartz, milling, when sorted, 125 ounces silver per ton; developed by one tunnel sixty feet long.

**Gray.**—300x1500 feet; situated on the west end of Yellow Mountain, two and one-half miles south-east of Ames, Iron Springs district, and located in October, 1881; owners Walter Evans, Ames, and R. Dunkelberger, Ogden, Ia.; vein a fissure forty inches wide, pay streak nine inches of gold-bearing quartz, assaying $24 per ton; developed by one ten-foot-face open cut and one six-foot shaft.

**Great Eastern.**—300x1500 feet; situated in Ingram Basin, five miles east of Telluride, Upper San Miguel district, and located in July, 1881; owners Oliver Wimer, Henry Abbott, and Henry Meyersieck, all Telluride; vein a fissure, eight feet wide, pay streak fourteen inches, containing quartz, galena, gray copper, and brittle silver, assaying $32 per ton; developed by one open cut and one tunnel thirty feet long.

**Great Eastern and Silver Heels.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north slope of Yellow Mountain, one and a half miles south-east of Ophir, Iron Springs district; located August, 1880; owners J. J. and C. B. Lawsha, and J. B. Ward, all Ophir; vein a fissure, four feet wide, pay streak five inches, containing galena and gray copper in quartz, milling, when sorted, seventy-five ounces silver per ton; developed by one drift 270 feet long and one shaft thirty-five feet deep.

**Great Mogul.**—(See Black Warrior and Great Mogul.)

**Gray Eagle.**—(Extension of Crescent City); 300x1500 feet; situated on the west side of Deep Creek, six miles west of San Miguel City, Upper San Miguel district, and located in July, 1882; owners V. Schmeck, Telluride, and Fred. J. Robbins, San Miguel City; vein a fissure, eight feet wide, with two pay streaks aggregating eighteen inches, and containing quartz, galena, and gray copper, assaying $50 per ton; developed by one ten-foot-face cut and one fifteen-foot tunnel; there is on this claim also a horizontal stratum of bituminous coal ten inches thick, developed by a drift 55x55 feet.

**Greenback.**—300x1500 feet; situated on the south slope of Silver Mountain, one and a half miles north-west of Ophir, Iron Springs district, and located in August, 1878; owners W. A. Koneman, Trout Lake, A. and F. M. Melick, both Chicago, and others; vein a fissure, thirty feet wide, containing free-milling gold quartz, yielding, when sorted, from one-half to three ounces gold and from two to five ounces silver per ton; developed by two open cuts fifty and twenty feet long each, with faces twenty-five and fifteen feet; output 400 tons.

**Hancock.**—(See Montezuma and Little Sioux Group.)

**Hanson.**—300x1500 feet; situated on the east side of Marshall Creek, two miles east of Telluride, Upper San Miguel district, and located in June, 1881; owners J. C. Brown, Wm. Dwyer, and S. Rohwer, all Telluride; vein a fissure, six feet wide, containing four feet of quartz, carrying gold and galena, and assaying $35 per ton; developed by an open cut and tunnel twenty-five feet long.



**Haught Boy.**—300x1500 feet; situated on the west side of the Howard Fork of the San Miguel River, three miles north-west of Ames, Upper San Miguel district, and located in September, 1882; owners Chas. Dolph and others, Ames; vein a fissure, two feet wide of quartz, carrying galena and gray copper; developed by an open cut with a ten-foot face and one twelve-foot tunnel.

**Hawkeye.**—300x1500 feet; situated on the south slope of Silver Mountain, three-fourths of mile north-west of Ophir, Iron Springs district, and located in March, 1879; owners Augusta Page & Bros., Boston; vein a fissure, thirty inches wide, pay streak six inches, containing galena in quartz, milling, when sorted, thirty per cent lead and 110 ounces silver per ton; developed by one sixty-one-foot tunnel and one eleven-foot shaft.

**Henry.**—Owned by G. W. Henry, Lake City, and Gus. Zacharias, Pittsburgh, Pa.; claim 300x1500 feet; situated on the east side of Bear Creek, two miles south-east of Telluride, Upper San Miguel district; vein a fissure, varying in width, pay streak fifteen inches, containing gold and silver bearing quartz, milling, when sorted, $100 per ton; developments—four open cuts with ten-foot faces each.

**Hidden Treasure.**—300x1500 feet; situated on the south slope of Silver Mountain, one and a fourth miles north of Ophir, Iron Springs district, and located in May, 1881; owners G. W. Goebel and C. B. and J. J. Lawsha, Ophir; vein a fissure, five feet wide, pay streak from six to eight inches, containing galena and quartz, assaying 150 ounces silver per ton; developed by one twenty-foot shaft.

**Hidden Treasure Group.**—Five claims, 300x1500 feet each, viz., Hidden Treasure, Mattie, White Mountain, San Miguel, and Wade Hampton; situated on the south slope of Mt. Sneffles, two miles north of Telluride, Upper San Miguel district; located in February, 1878; owners E. N. McClain, Telluride, W. W. and L. M. Remine, San Miguel City, and Becker Folsom, McPherson, Kas.; veins all fissures, four feet wide each, containing quartz, galena, and gray copper, milling, when sorted, $35 per ton; developed by five tunnels ten feet long each and eight open cuts with ten-foot faces each.

**Hilman.**—300x1500 feet; situated on the west side of Bear Creek, four miles south of Telluride, Upper San Miguel district; located in July, 1880; owners L. R. Blake and A. B. Perdue, both Telluride, and E. L. Davis, Rico; vein a fissure, three feet wide, pay streak from twenty to twenty-four inches of gold-bearing quartz, assaying $50 per ton; developed by one tunnel twenty feet long.

**Home-stake.**—300x1500 feet; situated on the north side of the San Miguel River, six miles west of San Miguel City, Upper San Miguel district; located in January, 1883; owners Geo. W. Donaldson and Geo. Sickles, both San Miguel City; vein a horizontal contact, fifty feet thick of gold-bearing sandstone, easily treated, and milling from $6 to $8 per ton; developed by two tunnels forty and fifteen feet long.

**Honduras and St. Bernard.**—Two claims, 300x1500 feet; situated on the south-east slope of St. Bernard Mountain, one-half mile west of Trout Lake, Iron Springs district; located in 1877, and patented in 1882; owners Gust. C. Giamboni, Trout Lake, and Jno. Eder, Rico; vein a fissure, forty inches wide, pay streak five inches, containing quartz, galena, and gray copper, assaying $100 per ton; developments—three levels, 90, 130, and 75 feet long, with some other workings.

**Honey-comb.**—300x1500 feet; situated on the south fork of Turkey Creek, three miles north-east of Ames, Upper San Miguel district; located in July, 1879; owners Aaron Jones and Mark Folsom, both Ames, and Jno. G. Williams, Boston; vein a fissure, four feet wide, containing mineralized quartz; developed by one thirty-five-foot tunnel.

**Honolulu.**—300x1500 feet; situated in Bridal-veil Basin, five miles south-east of Telluride, Upper San Miguel district; located in October, 1882; owners C. S. Watson, Telluride, Dr. A. F. Litchfield, Corunna, Mich., and others; vein a fissure, two feet wide, pay streak from four to ten inches of gold and silver bearing quartz; developed by one fifteen-foot tunnel.

**Honolulu, No. 2.**—300x1500 feet; situated in Marshall Basin, three miles north-east of Telluride, Upper San Miguel district; located in January, 1883; owners J. R. Hogan, F. C. Garland, and C. C. Ricker, all Telluride; vein a fissure, three feet wide, pay streak four inches, containing gold quartz, assaying $60 per ton; developed by one tunnel ten feet long.

**Huerfano.**—(On the Smuggler vein); 300x300 feet; situated in Ingram Basin, three miles east of Telluride, Upper San Miguel district; located in August, 1881; owners T. S. Mathis, Geo. S. Andrus, J. W. McKee, and C. F. Painter, all Telluride; vein a fissure, ten feet wide, pay streak five feet, containing quartz, galena, and gray copper, assaying seventy ounces silver and two ounces gold per ton; developed by one twenty-five-foot open cut and tunnel.

**Hyacinth.**—(See Gold and Silver Chief and Hyacinth.)

**I. X. L.**—(Extension of Flora); 300x1500 feet; situated in Savage Basin, five miles east of Telluride, Upper San Miguel district; located in December, 1882; owners Thos. Thomas and Thos. E. James, both San Miguel City, and Ed. Henry, Telluride; vein a fissure, four feet wide, pay streak nine inches, containing gold-bearing quartz, assaying $46 per ton; developed by one ten-foot shaft.

**Illinois Placer.**—Twenty acres; situated on the north side of the San Miguel River, adjoining San Miguel City; located in March, 1878; owner N. N. Pond, San Miguel City; developed by one fifteen-foot shaft and forty feet of sluicing; one house on the claim.

**Index.**—300x1500 feet; situated on the south fork of Turkey Creek, four miles north-east of Ames, Upper San Miguel district; located in September, 1879; owner H. J. Caldwell, Rico; vein a fissure, varying in width, and containing galena and gray copper in the quartz; developed by one thirty-foot shaft.

**Index.**—300x1500 feet; situated in Marshall Basin, three miles north-east of Telluride, Upper San Miguel district; located in January, 1883; owners J. R. Hogan, M. A. Wood, L. B. Dewey, J. B. Tendrick, and F. C. Garland, all Telluride; vein a fissure forty inches wide, pay streak from six to eight inches, containing galena in quartz carrying gold, assaying $100 per ton; developed by two tunnels twenty and twelve feet long.

**Ingersoll.**—300x1500 feet; situated on the north side of the San Miguel River, one mile north-east of Telluride, Upper San Miguel district; located in June, 1881; owners H. C. Meyersieck, L. C. Pearson, Wm. Gillian, and Wm. Schalla, all Telluride; vein a fissure five feet wide, pay streak fourteen inches, containing gold and silver bearing quartz, assaying $40 per ton; developed by sixty-three feet of tunneling.



**Iron.**—300x1500 feet; situated in Savage Basin, four miles east of Telluride, Upper San Miguel district; located in July, 1879; owners Charles M. Ryan, Pandora, Thomas Sharpless, and Ed. James, both Telluride, and C. W. Sears, Ashcroft, and Calvin Donaldson, Pueblo; vein a fissure twelve feet wide, pay streak from twenty to twenty-four inches, containing lead carbonates in a decomposed gangue, assaying fifty per cent lead and forty ounces silver per ton; developed by one shaft twenty-five feet deep.

**Isabella.**—300x1500 feet; situated on Turkey Creek, eight miles south-west of Telluride, Upper San Miguel district; located in August, 1881; owner M. D. L. Houston, Telluride; vein a fissure three feet wide, pay streak nine inches, containing galena and quartz, assaying thirty-two ounces silver per ton; developed by one twenty-foot tunnel.

**Isabella.**—300x1500 feet; situated on the south-west slope of Silver Mountain, three miles west of Trout Lake, Iron Springs district; located in April, 1880; owners Maurizeo Giannini and Gust. C. and S. Giamboni, all Trout Lake; vein a fissure four feet wide, containing galena and quartz, assaying thirty per cent lead and fifteen ounces silver per ton; developed by one tunnel 150 feet long and one shaft twenty-five feet deep.

**Ivanhoe.**—300x1500 feet; situated on the east side of Bear Creek, two miles south of Telluride, Upper San Miguel district; located in August, 1882; owner Dr. H. H. C. Kay, Telluride; vein a fissure six feet wide, pay streak six inches, containing gold-bearing quartz, assaying $75 per ton; developed by one twenty-three-foot tunnel.

**J. Alton.**—(On the Smuggler vein); 300x1500 feet; situated in Ingram Basin, three miles east of Telluride, Upper San Miguel district, located in July, 1880; owners A. B. Perdue, Telluride, and E. L. Davis, Rico; vein a fissure ten feet wide, pay streak five feet, containing galena and gray copper in quartz, milling, when sorted, seventy ounces silver and two ounces gold per ton; developed by one open cut and tunnel thirty-five feet long and one shaft 150 feet deep.

**J. H. Haverly Golden Group Mining Company (The).**—Incorporated under the laws of Colorado in February, 1878; capital stock $6,000,000, in 600,000 shares of $10 each, non-assessable; president, H. H. Walker, Michigan City, Ind.; vice-president, H. C. Diehl; secretary, R. C. J. Pendleton; treasurer, W. H. Thomas—all Indianapolis, Ind.; offices Telluride and Indianapolis; owns fourteen claims, 300x1500 feet each, viz.: Kokomo, Canton, Star, Northern Ohio, Golden Chief, Savage, Tiger, Colorado, Kansas, Great Eastern, Elizabeth, Queen Mary, Mayflower, and Lizzie Sheridan; situated on Bear Creek, from three to four miles south of Telluride, Upper San Miguel district; located in February, 1877; veins all fissures from one-half to thirty feet wide, containing gold-bearing quartz, assaying an average of $25 per ton; developed by 1,200 feet of tunneling and eight open cuts from ten to twenty-five feet in length.

Owns a stamp-mill (built by Fraser & Chalmers, Chicago), situated on Bear Creek, two miles south of Telluride, containing Blake Crusher, ten 750-pound Stamps, Frue Vanners, engine, boiler, etc.; capacity fifteen tons per day.

**Jay Gould.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in May 1880; owners C. W. Haskins, Ouray, J. H. Bishop, Telluride, W. M. Leeson, San Miguel City, Henry A. Wood, Louisiana, Mo., and E. M. Pierce, New York City; vein a fissure forty inches wide, pay streak fourteen inches, containing galena in quartz, carrying gold, assaying one and one-half ounces gold and fifteen ounces silver per ton; developed by one shaft twenty feet deep.

**Jennie Butler.**—300x1500 feet; situated on the east side of Bear Creek, two and one-half miles south-east of Telluride, Upper San Miguel district; located in July, 1881; owners F. D. Margowski, H. D. McGillovay, and W. A. Taylor, all Telluride; vein a fissure forty inches wide, pay streak twenty-eight inches, containing gold quartz, milling, when sorted, $18 per ton; developed by two drifts five and thirty-three feet long.

**Jennie Hawkins.**—300x1500 feet; situated on the east fork of Mill or Park Creek, two and one-half miles north of San Miguel City, Upper San Miguel district; located in March, 1878; owners W. W. Remine, San Miguel City, D. W. Morehouse, R. A. Blair, S. B. Cronkleton, and A. B. Cooper, all Telluride; vein a fissure six feet wide, pay streak twelve inches, containing galena and gray copper in quartz, milling, when sorted, twenty-five per cent lead and sixty-five ounces silver per ton; developed by one forty-foot tunnel and several open cuts.

**Jim Fisk.**—300x1500 feet; situated on the north slope of Yellow Mountain, three-fourths mile south-west of Ophir, Iron Springs district; located in August, 1878; owners W. H. Bush, Silverton, and M. S. Folsom, Minneapolis, Minn.; vein a fissure four feet wide, pay streak six inches, containing quartz, galena, and some gray copper, assaying forty-four per cent lead and fifty-eight ounces silver per ton; developed by two shafts twenty-two and eighteen feet deep and one open cut and tunnel thirty feet long, sixteen feet of which is under cover.

**Joaquin, Morning Star, and White Swan.**—Three claims, 300x1500 feet each; situated on the north slope of Yellow Mountain, one-half mile south-west of Ophir, Iron Springs district, and located in 1878; owner J. M. Simmons, Ophir; veins all fissures eight feet wide each, containing quartz with galena and gray copper, assaying from $75 to $85 per ton; developed by two tunnels forty-five feet long each, and one thirty-two-foot shaft.

**Jumbo.**—(See Dan Rice and Jumbo.)

**Kenrick.**—Owned by Joseph A. Beattie, Trout Lake; claim 300x1500 feet; situated on the south-west slope of Yellow Mountain, one mile from Trout Lake, Iron Springs district, and located in 1877; vein a fissure varying in width, with a fairly good pay streak on the foot-wall, containing gray copper and galena in a quartz gangue; developed by a ninety-foot tunnel, and some other workings.

**Keokuk Hydraulic Placer Mining Company (The).**—Incorporated under the laws of Colorado in 1879; manager, E. C. Tollenger Keokuk, Ia.; offices Keokuk, Ia.; owns Montana and Kansas City Bars (placers), covering 40 and 160 acres, and an interest in the Chicago Bar, 160 acres, adjoining (see Chicago Bar); situated on the Lower San Miguel River, four miles west of Placerville, Lower San Miguel district, and located in 1877; production probably twenty-eight cents per cubic yard; developments—fifteen miles of ditching, one-fourth mile of fluming, and 400 feet of piping; worked by one Little Giant.

**Keystone Hydraulic Mining Company (The).**—Incorporated under the laws of Maine, in 1880; capital stock $300,000, in 60,000 shares of $5 each, non-assessable; president, Pierre Humbert, Jr.; vice-president, C. R. Howard—both Boston; general manager, D. T. Thompson, Pekin, Ill.; superintendent, W. R. Mesick, Jr., San Miguel City; offices 93 Milk street, Boston, and at San Miguel City; owns Keystone, Extension of Keystone, Washington, Colorado, and Pekin placers, five claims, covering 153, 153, 153, 20, and 40 acres, respectively; situated on the San Miguel River, two and one-half miles west of San Miguel City, Upper San Miguel district; located in 1878 and 1879; the first two patented, and the others in process; production probably twenty-eight cents per cubic yard; developed by 2,600 feet of fluming, 400 feet of sluicing, two undercurrents eight and twenty-four feet in size, 1,100 feet of iron pipe averaging fifteen inches in width; worked by one Giant with 325-foot head.



**Kimball and Wheeler Placers.**—Five claims, viz., A, B, C, D, and E, covering 400 acres; situated on the San Miguel River, four miles east of Placerville, Lower San Miguel district; located in July and August, 1877; the A and E in process of patent; owners Gordon Kimball, Chas. A. and W. D. Wheeler, all Ouray, and W. H. Wheeler, Ames; developments—five miles of ditching, 2,000 feet of fluming, 800 feet of iron piping with 235-foot head; worked by one Little Giant; production probably twenty-eight cents per cubic yard; output $4,000.

**King of the Needles and Mystery.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the north side of Howard's Fork of the San Miguel River, two miles north-west of Ophir, Iron Springs district, and located in 1880 and 1881; owned by the Jewel Gold and Silver Mining Company (see Dolores County); vein a fissure from eight to twenty feet wide, pay streak from twenty to twenty-five inches, containing galena and gray copper in quartz, milling, when sorted, twenty-one ounces silver per ton; developed by two tunnels fifty and twenty-five feet long, with a cross-cut from the first twelve feet long, and one fifteen-foot-face cut.

**Kingsmill.**—300x1500 feet; situated on the north slope of Yellow Mountain, one-fourth mile south west of Ophir, Iron Springs district, and located in June, 1878; owners Jas. Kernahan, Ophir, and Wm. Carey, St. Louis; vein a fissure forty inches wide, pay streak five inches, containing galena in quartz, milling, when sorted, fifty-five ounces silver per ton; developed by one drift 110 feet long, with some other workings.

**La Crosse.**—(See Celina Mining and Milling Company.)

**La Florista.**—(On Pulaski vein); owned by I. M. Kelsey, James Kelsey, W. E. Wheeler, W. R. Mesick, Jr., John T. Ryan, and W. H. Bailey, all Telluride; claim 300x1500 feet; situated in Bridal-veil Basin, four miles south-east of Telluride, Upper San Miguel district, and located in August, 1882; vein a fissure from three to twelve feet wide, pay streak two feet, containing galena in a quartz gangue, assaying fairly; developed by one twenty-foot shaft.

**La Rosa.**—300x1500 feet; situated in Bear Creek Basin, two and one-half miles south of Telluride, Upper San Miguel district, and located in 1881; owners J. R. Grant, Telluride, Dr. W. W. Rowan and Dr. Alex. Hazard, both Ouray; vein a fissure two feet wide, containing gray copper and quartz, assaying 110 ounces silver and a trace of gold per ton; developed by one tunnel thirty feet long.

**Lambert.**—300x1500 feet; situated in Bridal-veil Basin, crossing the Pulaski, six miles south-east of Telluride, Upper San Miguel district, and located in June, 1882; owners John Schwab and Fred. and Geo. Tank, all Telluride; vein a fissure eight feet wide, pay streak eighteen inches, containing gold and silver bearing quartz, assaying $60 per ton; developed by one thirty-foot tunnel.

**Last Chance.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district, and located in July, 1881; owners J. W. McKee, F. D. Margowski, and Eli Loshbaugh, all Telluride; vein a fissure eight feet wide, pay streak forty inches, containing galena, gray copper, and quartz, assaying fifty ounces silver per ton; developed by one shaft twenty feet deep.

**Last Chance.**—300x786 feet; situated on the west side of Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district, and located in August, 1881; owners Wm. H. Evick, Chattanooga, and R. Miller, Pandora; vein a fissure seven feet wide, pay streak eighteen inches, containing gold and silver bearing quartz, assaying $169 silver and $15 gold per ton; developed by one fifteen-foot shaft.

**Laura.**—300x1500 feet; situated in Bridal-veil Basin, three miles south-east of Pandora, Upper San Miguel district; located in May, 1881; owners W. F. and C. D. Johnson, both Pandora; vein a fissure, six feet wide, with two pay streaks eighteen inches wide each, containing gold-bearing quartz, assaying $300 per ton; developed by one forty-foot open cut and one twenty-foot tunnel.

**Lewis.**—(See Bridal-veil Mining Company.)

**Lily of the West.**—(See Golden Eagle and Lily of the West.)

**Lily, Pride of the West, and Nimbus.**—Three claims, 300x1500 feet each; situated in Bridal-veil Basin, four miles south-east of Telluride, Upper San Miguel district; located in 1880–81; owners E. S. Orr, G. I. Coleman, and A. W. Snyder, all Telluride, and M. Coleman, Wellsville, Pa.; vein a fissure, from twenty to forty inches wide, containing gold and silver bearing quartz, assaying $35 per ton; developed by two tunnels forty and twenty feet long.

**Linn County.**—300x1500 feet; situated on the north slope of Yellow Mountain, two miles from Ophir; located in June, 1880; owners J. C. Sweeney, S. R. Fitzgarrald, and Wm. McGuigan, all Ophir; vein a fissure, two feet wide, pay streak from one to two inches of quartz, galena, and gray copper, assaying from thirty to fifty ounces silver per ton; developments—one level 100 feet long.

**Little Annie.**—300x1500 feet; situated in Bridal-veil Basin, six miles south-east of Telluride, Upper San Miguel district; located in June, 1882; owners Jno. Schwab and Fred. and Geo. Tank, all Telluride; vein a fissure, five feet wide, pay streak ten inches, containing gold-bearing quartz and native copper, assaying $50 per ton; developed by one twenty-foot shaft.

**Little Carrie.**—300x1500 feet; situated in La Junta Basin, one and one-half miles south-east of Telluride, Upper San Miguel district; located in 1881; owners L. B. Dewey, Telluride, D. A. Galusha and Jno. Ruble, both Pueblo; vein a fissure five feet wide, pay streak fifteen inches, containing silver-bearing quartz, assaying fifty-three ounces silver per ton; developed by one open cut forty feet long.

**Little Chief.**—300x1500 feet; situated in Bridal-veil Basin, four miles south-east of Telluride, Upper San Miguel district; located in July, 1881; owner F. M. Dunlap, Telluride; vein a fissure forty inches wide, pay streak from twenty to thirty inches, containing gold and silver bearing quartz, assaying $25 per ton; developed by one open cut and tunnel twenty-five feet long.



**Little Clara and Page.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on the east slope of Yellow Mountain, one and one-half miles south of Ophir, Iron Springs district; located in January, 1883; owner J. W. Kernahan, Ophir; vein a fissure five feet wide, pay streak six inches, containing brittle silver and gray copper in quartz, milling, when sorted, 175 ounces silver per ton; developed by two open cuts with fourteen-foot faces, each.

**Little Ella and Robert E. Lee.**—Two claims, 300x1500 feet each; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district, and located in October, 1882; owners Jno. A. Adams, J. N. Haynes, J. A. Goodwin, W. H. Wright, and Wilt & Dirge, all Telluride; veins both fissures four feet wide each, pay streak fourteen inches, containing quartz, black sulphurets, and silver glance, assaying from $75 to $100 per ton; developed by two tunnels seventy-six and thirty feet long.

**Little Emma.**—(See Evans Mining and Milling Company.)

**Little Eva.**—300x1500 feet; situated on the south slope of Silver Mountain, one quarter of a mile north of Ophir, Iron Springs district; located in October, 1878; owners F. J. Kramer, C. H. Sage, and Hermann Nieland, all Ophir; vein a fissure four feet wide, pay streak eighteen inches, containing gold and silver quartz, milling, when sorted, $30 per ton; developed by one thirty-five-foot drift, and one open cut, with thirty-foot face, and a ten-foot shaft from end of cut.

**Little Fawn.**—300x1500 feet; situated on the west side of Prospect Creek, four and one-half miles south of Telluride, Upper San Miguel district; located in July, 1881; owners John C. Kane, Chattanooga, and Joseph Blamey, Ames; vein a fissure five feet wide, pay streak seven inches, containing galena and quartz, assaying twenty-five ounces silver per ton; developed by one sixty-foot shaft, and one fifty-foot tunnel, designed to cut the bottom of shaft.

**Little Jake.**—300x1500 feet; situated in West Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district; located in April, 1881; owner James Kernahan, Ophir; vein a fissure six feet wide, pay streak three feet, containing spar and galena, assaying twenty-two per cent lead and sixty ounces silver per ton; developed by one twenty-foot-face open cut.

**Little Jennie Tunnel Site.**—3000x6 feet; situated on the north-west slope of Yellow Mountain, three-quarters of a mile south of Ames, Iron Springs district; located in September, 1882; owners A. C. Warfield, Philadel-Pa., F. N. Buck, W. G. Pennypacker, G. S. Capell, and E. T. Walton, all Wilmington, Del.; agent, H. P. Walton, Silverton; on which a tunnel is now driven 400 feet long, designed to cut the Little Jennie and King Solomon veins (and any blind leads shown to exist in the progress of the work), both of which are owned by the same parties, the King Solomon containing a fissure vein six feet wide, pay streak ten inches, containing quartz, galena, and chlorides, assaying thirty-five ounces silver per ton; developed by two open cuts with ten-foot faces each, one fifteen-foot tunnel, and one ten-foot shaft.

**Little Maggie No. 3.**—300x1500 feet; situated on the north-east slope of Neumeyer Mountain, one-half mile west of Trout Lake, Iron Springs district; located in June, 1880; owners Chas. Roden, Trout Lake, and Mrs. Maggie Wise, Rico; vein a fissure, four feet wide, containing gold quartz, assaying $110 per ton; developed by one twenty-five-foot open cut and tunnel.

**Little Mary Group.**—(See San Miguel Concession.)

**Little Pittsburgh.**—(See Big Pittsburgh.)

**Little Sioux.**—(See Montezuma and Little Sioux Group.)

**Lookout.**—(See Duquesne Mining Company.)

**Louisa.**—300x1500 feet; situated in Prospect Basin, six miles south-west of San Miguel City, Upper San Miguel district; located in July, 1879; owners Geo. H. Towle, Boston, Aaron Jones and Mark Folsom, both Ames; vein a fissure, six feet wide, pay streak from ten to fourteen inches, containing gray copper and quartz, assaying 150 ounces silver per ton; developed by one cross-cut tunnel thirty feet long and three open cuts with ten-foot faces each.

**Lucille and Roderick Dhu.**—Two claims, 300x1500 feet each; situated on the east side of Summit Creek, seven miles west of San Miguel City, Upper San Miguel district; located in March, 1882; owners W. W. Remine and David Young, both San Miguel City; veins both fissures, from eight to twenty-four feet wide, pay streaks from eighteen to twenty-four inches, containing galena in a quartz, milling, when sorted, fifty per cent lead and from forty to sixty ounces silver per ton; developed by two tunnels eighty-five and fifteen feet long, respectively.

**Mackoy.**—(See McCormick and Mackoy.)

**Madison.**—300x750 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in 1878; owners P. H. Anderson, J. W. Carpenter, and O. J. Davis, all Ouray; vein a fissure seven feet wide, pay streak from nine to fifteen inches, containing galena and gray copper in quartz, carrying gold and yielding well; developed by one fifteen-foot shaft.

**Magnolia.**—300x1500 feet; situated on the north-west slope of Yellow Mountain, one and one-fourth miles south-west of Ophir, Iron Springs district; located in May, 1876; owners Henry Clark, Montgomery, Mo., Lemuel Sears and Maurice McHalpin, both Ophir; vein a fissure thirty feet wide, pay streak from twelve to twenty inches, containing at the outcrop galena, gray copper, and chlorides, in quartz, assaying 100 ounces silver and one-half ounce gold per ton; developed by one fifty-foot drift, with some other workings.

**Magnolia, Silver Giant, and Last Chance.**—Three adjoining claims on the same vein, 300x1500 feet each; situated on Mill or Park Creek, three miles north of Telluride, Upper San Miguel district; the first located in August, 1881, and the last two in August, 1882; owner D. Overstreet, Telluride; vein a fissure six feet wide, pay streak fourteen inches, containing galena, gray copper, and sulphurets of silver, in a quartz gangue, milling, when sorted, twenty ounces silver per ton; developed by two shafts forty and twenty-five feet deep and an open cut twenty-five feet long.

**Manhattan.**—300x1500 feet; situated in Bridal-veil Basin, four miles south-east of Pandora, Upper San Miguel district; located in May, 1882; owner Chas. D. Johnson, Pandora; vein a fissure eight feet wide, pay streak twenty inches, containing gold-bearing quartz, assaying $60 per ton; developed by one twenty-five-foot open cut.

**Marshall Basin Mining Company (The).**—Incorporated under the laws of New York, in March, 1881; capital stock $240,000, in 48,000 shares of $5 each, non-assessable; president, Benj. F. Stevens; vice-president, Geo. C. Robinson; secretary and treasurer, Wm. W. Rossiter—all Brooklyn; office 77 Broad street, New York City, and at Telluride; owns two adjoining claims on the Big Elephant vein, viz.: Argentine No. 1 and Argentine No. 2, 300x750 and 300x1500 feet, respectively; situated on the Savage fork of Marshall Creek, four and three-fourths miles north-east of Telluride, Upper San Miguel district; located in August, 1878, and patented in February, 1883; vein a fissure from eight to twenty feet wide, pay streak from ten to twenty-four inches, containing gold and silver bearing quartz, milling, when sorted, $100 in gold and 50 ounces silver per ton (the silver ore being a concentrating product); developed by a shaft 160 feet deep and 240 feet of drifting, with some other workings and some improvements.



**Marshall Creek No. 2 Placer.**—Twenty acres; situated on Marshall Creek, three miles east of Telluride, Upper San Miguel district, and located in May, 1879; owners Morris Thompson and R. F. Dunning, both San Miguel City, and Barlow Davis, Evart, Mich.; developed by 100 feet of ditching and an open cut with a fourteen-foot face.

**Mary.**—300x1500 feet; situated on the south-east slope of St. Bernard Mountain, one-half mile west of Trout Lake, Iron Springs district, and located in July, 1880; owners A. Gorla, St. Louis, A. V. Gorla, Rico, Joseph Catto, and Gust. C. Giamboni, both Trout Lake; vein a fissure three feet wide, containing quartz with galena and gray copper; developed by three open cuts with ten-foot faces each.

**Mary Belle.**—300x1500 feet; situated in Marshall Basin, adjoining Pandora, Upper San Miguel district, and located in March, 1881; owners J. C. Brown and H. D. McGillvray, both Telluride; vein a fissure thirty inches wide, pay streak ten inches, containing gold-bearing quartz, assaying $25 per ton; developed by one twenty-five-foot tunnel and one ten-foot open cut.

**Mary E. Placer.**—Sixty acres, situated at the confluence of the Howard fork of the San Miguel River, Upper San Miguel district, and located in May, 1881; owners J. W. Vance, Ames. S. B. Coonkleton, Telluride, and L. M. Kelly, Elgin, Ills.; developments—one mile of ditching and one fifteen-foot shaft; probable production from twenty to twelve cents per cubic yard.

**Matilda.**—300x1500 feet; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district, and located in 1878; owners C. W. Haskins, Wm. Kilpatrick, and Munn Bros., all Ouray; vein a fissure three and one-half feet wide, with three pay streaks aggregating ten inches, containing ruby and native silver, and some galena, in a quartz gangue carrying gold, milling, when sorted, $130 per ton; developed by one twenty-five-foot shaft and one thirty-five-foot open cut and tunnel.

**Mattie D.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-half miles north-west of Ophir, Iron Springs district, and located in August, 1881; owner W. A. Koneman, Trout Lake; vein a fissure twenty feet wide, containing free-milling gold quartz, interspersed through porphyry, and assaying from one-half to one and one-half ounces gold and from two to five ounces silver per ton; developed by two open cuts with fourteen-foot faces each.

**Maud.**—300x1500 feet; situated at the mouth of Ingram Basin, three miles east of Telluride, Upper San Miguel district, and located in July, 1880; owners James M. Mackoy and W. W. Stoddard, both Ouray; vein a fissure forty inches wide, containing gold quartz, assaying $10 per ton; developed by one thirty-foot tunnel.

**Mayflower.**—(Extension of Tidal-wave); 300x1500 feet; situated on the north slope of Silver Mountain, two and a half miles north-west of Ophir, Iron Springs district, and located in October, 1881; owners E. D. Silsby and

John Dwyer, both Ophir; vein a fissure, two and a half feet wide, pay streak five inches, containing quartz with native and brittle silver; developed by one ten-foot-face open cut and one ten-foot drift.

**McCormick and Mackoy.**—Two claims, 300x1500 feet each; situated at the mouth of Ingram Basin, three miles east of Telluride, Upper San Miguel district, and located in July, 1880; owners Jas. M. Mackoy, Ouray, and H. McCormick, Atchison, Kas.; veins both fissures, thirty-six and twenty inches wide, respectively, containing gold-bearing quartz, assaying from $20 to $25 per ton; developed by two tunnels twenty and thirty-five feet long.

**Memphis.**—300x1500 feet; situated in Marshall Basin, five and a half miles north-east of Telluride, Upper San Miguel district; located in 1876, and patented; owner T. P. Medley, London, Eng.; vein a fissure, ten feet wide, containing gold-bearing quartz with some galena and gray copper, assaying from twenty-five to forty ounces silver per ton; developed by one tunnel 100 feet long.

**Mendota and Uno.**—Two claims, the first an extension of the Sheridan, 300x1500 feet each; situated in the Marshall Basin, five miles north-east of Telluride, Upper San Miguel district, and located in November, 1878 and 1879; owners W. R. Everett and J. T. Donnellan, both Ouray; vein a fissure, four and six feet wide, pay streaks from eighteen to twenty-eight inches, averaging about twenty-two inches, containing an ore and gangue similar to that in the Sheridan and Smuggler, the adjoining claims on the same vein; developments—one shaft 100 feet deep, from which run two levels 130 and 75 feet long, and about twenty feet square of stoping, out of which workings about six inches in width of the pay streak was shipped, milling, when sorted, from 100 to over 400 ounces silver, and yielding from none to three ounces gold per ton, the other eighteen inches, assaying over fifty ounces silver per ton, remaining on the dumps awaiting cheap transportation.

**Meserole and Blake.**—Two claims, 300x1500 feet each; situated in Ingram Basin, two miles from Telluride, Upper San Miguel district, and located in 1880; owners G. V. Meserole and Geo. E. Blake, both Pueblo, and A. H. Brown, Washington, D.C.; vein a fissure, varying in width, and containing quartz, galena, and gray copper, assaying fairly; developments—assessment work.

**Middlesex Mining Company (The).**—Manager, H. W. Butler; owns Butler lode, 300x1500 feet; situated on the north slope of Yellow Mountain, one and one-half miles south-west of Ophir, Iron Springs district; located in 1878; veins (there are three) all fissures, three, seven, and twelve feet wide, pay streak from six to twelve inches in the three-foot vein, and in the others the mineral is scattered through the vein-matter, containing galena, gray copper, and chlorides, in quartz, milling, when sorted, 25 per cent lead and 125 ounces silver per ton; developments—one drift on vein 110 feet long, one shaft 160 feet deep, with four drifts running therefrom aggregating 120 feet in length, and one cross-cut 150 feet long, with some stoping; output forty tons.

**Minitonka.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district, and located in July, 1881; owners E. S. Orr, G. I. Coleman, and A. W. Snyder, all Telluride; vein a fissure, forty inches wide, pay streak eighteen inches, containing quartz, galena, and gray copper, assaying forty ounces silver per ton; developed by one fifteen-foot open cut and one twenty-foot tunnel.

**Minnie.**—300x1500 feet; situated on the south slope of Silver Mountain, three-fourths of mile north-west of Ophir, Iron Springs district, and located in June, 1881; owner A. H. Goddard, Ophir; vein a fissure, six feet wide, pay streak seven inches, containing galena, gray copper, and chlorides in quartz, milling, when sorted, $100 per ton: developed by one fifteen-foot shaft and one thirty-five-foot drift.



**Minnie Myrtle.**—(See Silver Belt Mining Company.)

**Mohawk.**—(See Big San Juan Mining Company.)

**Maud S.**—(See St. Julien and Maud S.)

**Mohawk.**—(Extension of Chicago); 300x1500 feet; situated on the north side of Yellow Mountain, one mile east of Ames, Iron Springs district, and located in February, 1883; owners L. E. Cone, F. J. Robbins, and M. F. Turner, all San Miguel City; vein a fissure six feet wide, pay streak twenty inches, containing gold and silver bearing quartz; developed by one ten-foot-face open cut.

**Monitor.**—(See Gold Check and Monitor.)

**Mono.**—300x1500 feet; situated in West Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district, and located in January, 1883; owners J. B. Ward, Chas. Pearson, Wm. Dana, J. Eckfeldt, and N. Lelong, all Ophir; vein a fissure three feet wide, pay streak five inches, containing galena in quartz, milling, when sorted, 110 ounces silver per ton; developed by two shafts twenty-two and ten feet deep.

**Monte Christo.**—300x1500 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district, and located in August, 1880; owners M. A. Wood and Wm. Dwyer, both Telluride; vein a fissure forty inches wide, pay streak eighteen inches, containing gold and silver quartz, assaying $16 per ton; developed by one twenty-foot tunnel.

**Montezuma and Little Sioux Group.**—Four claims, 300x1500 feet each, viz., Montezuma, Hancock, Little Sioux, and Bessie; situated on the south fork of Turkey Creek, eight miles south-west of San Miguel City, Upper San Miguel district, and located in 1876, 1877, and 1878; owners Jas. A. Watton and Michael Dowd, both Ames, Jno. Eder, Rico, and Chas. Demick, Pueblo; veins all fissures, from four to eight feet wide, pay streaks from fourteen to thirty inches, containing gold and silver bearing quartz, milling, when sorted, $10 per ton; developed by six tunnels from 50 to 100 feet in length, and aggregating 450 feet.

**Montezuma Mining Company.**—(Unincorporated); president, J. B. Sneathen; vice-president, Jacob Klee—both Pittsburgh; secretary, Moritz Rich; treasurer, Jno. H. Maugham—both Lake City; manager, B. F. Klee, Rico; offices 176 and 178 Wood street, Pittsburgh, and at Ophir; owns the Montezuma, 300x1500 feet; situated on the Howard fork slope of Yellow Mountain, Iron Springs district, near Ophir; located in 1878; vein a fissure, thirty inches wide, pay streak from ten to fifteen inches, containing galena and gray copper in quartz, milling, when sorted, twenty-eight per cent copper, thirty-five per cent lead, and 111 ounces silver per ton; developed by one shaft 100 feet deep, one cross-cut 143 feet long, and one drift thirty-seven feet long; output forty tons.

**Montevideo.**—300x1500 feet; situated on the south slope of Yellow Mountain, two miles north-east of Trout Lake, Iron Springs district; located in March, 1883; owners Louis Walden, ——— Battista, and G. Scigolini, all Trout Lake; vein a fissure, thirty-five feet wide, containing gold-bearing quartz, assaying two ounces gold per ton; developed by one fifty-foot tunnel.

**Monticello.**—300x1500 feet; situated in Prospect Basin, two and one-half miles south of San Miguel City, Upper San Miguel district; located in 1876; owners the Thornburg Mining Company, Geo. H. Towle, Boston, Wm. Crim, Carrollton, Ohio, Mark Folsom, Ames, and Orrin Parsons, Ophir: vein a fissure, forty inches wide, pay streak from six to twelve inches, containing galena, gray copper, and sulphurets, in quartz, milling, when sorted, 150 ounces silver per ton; developed by one shaft twenty feet deep and an open cut and tunnel fifty feet long.

**Monticello.**—(South-west extension of Powhattan); 300x1500 feet; situated on the south slope of Silver Mountain, one-fourth mile north of Ophir, Iron Springs district; located in May, 1878; owners M. J. Alkire and Amos Lane, both Ophir; vein a fissure, six feet wide, pay streak twenty-four inches, containing gold and silver bearing quartz, similar in character to Powhattan ore; developments—three open cuts with fifteen-foot faces each.

**Morning Star.**—(See Joaquin, Morning Star, and White Swan.)

**Mount Campbell.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north-east of Ophir, Iron Springs district; located in 1876; owners John Eder, Rico, and Gust. C. Giamboni, Trout Lake, and others; vein a fissure twelve feet wide, containing more or less gold-bearing quartz, assaying from one-half to three-fourths ounces gold and ten ounces silver per ton; developed by one seventy-foot tunnel and one forty-foot open cut.

**Mount Sneffles No. 2.**—300x1500 feet; situated in Marshall Basin, six miles north-east of Telluride, Upper San Miguel district; located in June, 1882; owners George P. Costigan, Telluride, and William Leeson, San Miguel City; vein a fissure forty inches wide, pay streak fourteen inches, containing gold-bearing quartz and galena, assaying $40 per ton; developed by one ten-foot-face cut.

**Mountain Boy.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-quarter miles north-east of Ophir, Iron Springs district; located in September, 1878; owners E. D. Silsby, Ophir, Fred. C. Sherwin, Silverton, and Henry Kingsmill, London, England; vein a fissure five feet wide, pay streak twenty inches of quartz, carrying a tellurium ore, milling, when sorted, $25 per ton; developed by one sixty-foot tunnel.

**Mountain Boy.**—300x1500 feet; situated on the north slope of Yellow Mountain, one mile south-west of Ophir, Iron Springs district; located in February, 1883; owner W. R. Weeks, Ophir; vein a fissure nine feet wide, pay streak four inches, containing galena and carbonates, assaying twenty-five ounces silver per ton; developments—one ten-foot-face cut.

**Mountain Chief.**—300x1500 feet; situated in Prospect Basin, six miles south-west of San Miguel City, Upper San Miguel district; located in July, 1879; owners Aaron Jones and Mark Folsom, both Ames, and George H. Towle, Boston, Mass.; vein a fissure six feet wide, containing mineralized quartz; developments—one thirty-seven-foot tunnel.

**Mountain Quail and Mountain Sheep.**—Two claims, 300x1500 feet; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district; located in June, 1877, and the former patented in 1883; owners F. R. Hamilton, San Miguel City, C. J. and Geo. J. Hamilton and C. S. Montague, Muskegan, Mich.; veins both fissures, eleven and five feet wide, pay streaks from five to twenty and twelve inches, respectively, containing gold and silver bearing quartz, milling, when sorted, from $100 to $125 per ton; developed by two tunnels 130 and 180 feet long and one shaft seventy feet deep.



**Mountain Range Group.**—Three claims, 300x1500 feet each, viz., Mountain Range, Silver Star, and Silver Gem; situated on the north slope of Yellow Mountain, one mile south-west of Ophir, Iron Springs district; located in 1879, 1881, and 1882; owner W. R. Weeks, Ophir; veins all fissures, two feet wide, pay streaks from ten to fifteen inches, containing gold and silver bearing quartz, assaying forty ounces silver per ton; developed by three open cuts with ten-foot faces each.

**Mother.**—300x1500 feet; situated on the north slope of Yellow Mountain, one and one-fourth miles south-west of Ophir, Iron Springs district; located in July, 1881; owner Orrin Parsons, Ophir; vein a fissure, fifteen feet wide, pay streak from ten to fifteen inches, containing quartz, galena, and gray copper, assaying 100 ounces silver per ton; developed by one thirty-foot tunnel.

**Muskegan.**—(See Big Muskegan.)

**N. W. H., Jr.**—(See Brooklyn and San Miguel Mining and Reduction Company.)

**Navike Placer.**—Twenty acres; situated on the north side of the San Miguel River, one and one-half miles west of San Miguel City, Upper San Miguel district; located in May, 1876, and patented in March, 1882; owner L. M. Remine, San Miguel City; production from 20 to 40 cents per cubic yard; developments—one-half mile of ditching and 100 feet of sluicing; improvements—two houses.

**Neptune.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in July, 1880; owners J. H. Haynes, Jno. A. Adams, and Chas. W. Umsted, all Telluride; vein a fissure, ten feet wide, pay streak from twenty-five to thirty inches, containing galena and quartz, assaying twenty-five ounces silver per ton; developed by one shaft twenty-five feet deep.

**Nellie.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north-west of Ophir, Iron Springs district; located in March, 1881; owners E. D. Silsby and J. C. Bates, both Ophir; vein a fissure five feet wide, pay streak six inches, containing galena in quartz carrying gold, assaying $50 per ton; developed by one twenty-five-foot drift.

**Nellie and Ella.**—Two claims, 300x1500 feet each; situated on the west side of Bear Creek, two and one-half miles south of Telluride, Upper San Miguel district; located in 1877; owners Geo. N. Hyde and W. H. Trout, both Telluride; vein a fissure from two to seven feet wide of free gold in a quartz gangue, milling, when sorted, $40 per ton; developed by 222 feet of tunneling and some other workings, exposing large ore-reserves; output 100 tons.

**Nettie.**—300x540 feet; situated on the Howard Fork of the San Miguel River, one-half mile from Ophir; located in 1876; vein a fissure, four feet wide, the contents of which mill, when sorted, an average of $100 per ton; developments—415 feet of work; output sixty-five tons, twenty-five of which have been sold, netting the owners $150 per ton.

**Nevada.**—(See Evans Mining and Milling Company.)

**New Australia.**—(See Aurora, New Australia, and Lady Elgin.)

**Newport Placer.**—160 acres; situated on the San Miguel River, one mile south-east of Pandora, Upper San Miguel district; located in August, 1880; owners W. F. Johnson, Pandora, G. W. Robson, Jr., G. W. Robson, Sr.,

Richd. S. Robson, Wm. H. Lape, J. C. Gaddis, Robert Waring, and Thos. B. Youtcey, all Newport, Ky.; developed by 500 feet of ditching; production probably six cents per cubic yard; ground heavily timbered.

**Newport (Ky.) Syndicate.**—Composed of G. W. Robson, Sr., and others, Newport, Ky.; manager, W. F. Johnson, Pandora, Colo.; owns eight claims, 300x1500 feet each, viz.: Golden Discovery, situated one mile north-east of Pandora, and R. A. Robson, two miles north-east of Pandora, both in Marshall Basin, Upper San Miguel district; located in 1880; veins both fissures from four to sixteen feet wide, pay streaks from eight to eighteen inches of gold-bearing quartz, milling, when sorted, from $20 to $50 per ton; developed by two forty-foot open cuts; Iron-clad, situated in Marshall Basin, four miles north-east of Telluride; located in August, 1880; vein a fissure six feet wide, pay streak twenty-two inches of galena and yellow copper in quartz, milling, when sorted, $30 per ton; developed by one twenty-five-foot open cut and one twenty-foot tunnel; Preston G. Moore, situated on the north side of the San Miguel River, between Pandora and Telluride; located in November, 1882; vein a fissure from four to thirty feet wide, with two pay streaks, first twenty inches of gold quartz, and second fifteen inches of silver quartz, assaying $30 per ton; developed by fifty-eight feet of tunneling and three twenty-five-foot open cuts; G. W. Robson and Ida M. Hill, situated on the south side of the San Miguel River, one-half mile south-west of Pandora; located in October, 1880; vein a fissure from four to thirty feet wide, with two pay streaks, one twenty inches of gold-bearing, and the other fifteen inches of silver-bearing quartz, assaying $35 per ton; developed by sixty feet of tunneling and seventy-five feet of open cuts; G. W. Robson, Jr., and Bridal-veil, situated in Bridal-veil Basin, two miles south-east of Pandora; located in 1880 and 1881; veins both fissures from three to seven feet wide, pay streaks from twelve to fifteen inches of quartz, galena, and yellow copper, assaying $25 per ton; developed by fifty feet of open cuts on each claim.

**None-such.**—300x1500 feet; situated on the west side of Bear Creek, two miles south of Telluride, Upper San Miguel district; located in August, 1880; owners Geo. N. Hyde and A. B. Cooper, both Telluride; vein a fissure five feet wide, containing gold-bearing quartz, assaying from $25 to $50 per ton; developed by one open cut and tunnel thirty feet long.

**Nonpareil.**—300x1500 feet; situated on the south-west slope of Yellow Mountain, two miles east of Trout Lake, Iron Springs district; located in August, 1882; owners Chas. Roden, Chas. Briggs, and D. McMahon, all Trout Lake; vein a fissure thirty inches wide, pay streak from ten to fourteen inches, containing quartz, galena, and gray copper, assaying $80 per ton; developed by one tunnel fifteen feet long.

**North Star and Lone Star.**—Two adjoining claims on the same vein, 300x1500 feet each; situated on Howard's fork of the San Miguel River, one and one-half miles east of Ames, Iron Springs district; located in January, 1881; owners W. R. Vanderveer, Jno. Meyer, and H. Weir, all Ames; veins both fissures three feet wide each, pay streaks from twenty to twenty-four inches, containing galena, gray copper, zinc blende, and quartz, assaying seventy-five ounces silver per ton; developed by three levels, seventy-five, thirty-five, and ten feet long.

**North-western Group.**—Three claims, 300x1500 feet each, viz., North-western, Lost Charley, and Gold Hill; situated on the north side of the San Miguel River, one and one-half miles west of San Miguel City, Upper San Miguel district; located in January, 1883; owners W. F. Stringer and G. W. McGraw, both San Miguel City; vein a horizontal contact fifty feet thick of gold and silver bearing sandstone, easily treated, milling from $6 to $8 per ton; developed by three open cuts with ten-foot faces each.



**Obliska.**—300x1500 feet; situated in West Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district, and located in March, 1883; owner Patrick Murray, Ophir; vein a fissure thirty inches wide, pay streak twelve inches, containing galena and quartz, assaying thirty per cent lead and seventy ounces silver per ton; developed by one forty-foot shaft.

**Ohio Placer.**—160 acres; situated in the San Miguel Park, one and one-half miles west of Telluride, Upper San Miguel district; located in 1876, and patented in 1880; owners J. H. Mitchell, Telluride, Frank P. Brown, San Miguel City, and others; developed by three shafts from fifteen to twenty-five feet deep.

**Ohio Girl and Lake View.**—Two claims, 300x1500 feet each; situated on the north slope of Sheep Mountain, five and one-half miles from Ames, Iron Springs district, and located in October, 1882; owners W. E. Lawton, C. P. Crawford, and P. J. Gibbons, all Ames; veins both fissures from eight to twenty inches wide, containing quartz, galena, gray copper, and brittle silver, assaying thirty-five ounces silver and one ounce gold per ton; developments—two thirteen-foot shafts.

**Old Abe.**—(See Expert, Old Abe, and St. Patrick.)

**Old Reliable.**—300x1500 feet; situated on the north slope of Yellow Mountain, three-fourths mile south of Ophir, Iron Springs district, and located in June, 1880; owners Walter Menefee, Silverton, A. Gorham, Durango, and G. E. Horman, Chicago; vein a fissure from two to three feet wide, pay streak five inches, containing carbonates, assaying fifty ounces silver and some gold per ton; developed by an eighty-six-foot tunnel, which will eventually cut the Caribou vein.

**Oliver Prescott.**—(Extension of Damon); 300x1500 feet; situated on the west side of Bear Creek, five miles south-east of Telluride, Upper San Miguel district, and located in August, 1879; owners C. M. Robinson, Red Mountain Town, and L. W. Robinson, Cañon City; vein a fissure four feet wide, pay streak eight inches, containing gold-bearing quartz, milling, when sorted, $60 per ton; developed by a drift thirty-eight feet long.

**Ophir Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1880; capital stock $150,000, in 15,000 shares of $10 each, non-assessable; president, G. S. Ingraham, Chicago; office Commercial Hotel, Chicago; owns the Chance, 300x1500 feet; situated on the south slope of Silver Mountain, adjoining Ophir, Iron Springs district, and located in 1879; vein a horizontal contact from two to four feet thick, containing lead carbonates, assaying twenty-five ounces silver per ton; developed by a tunnel 100 feet long on the vein.

**Ophir Needles Mining Company (The).**—Incorporated in February, 1883; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, John M. Devine, Boston; offices Boston and Ophir; owns six claims, 300x1500 feet each, viz., Tidal-wave, Silver Leaf, Pompeii, Mayflower, Grand Turk, and Utah; situated on the south slope of Silver Mountain, two and one-half miles north-west of Ophir, Iron Springs district; the first four located in September, 1881, and the others in May, 1882; veins all fissures from twenty to forty inches wide, pay streaks from eight to ten inches, containing galena and sulphurets in a quartz gangue, the Tidal-wave ore milling, when closely sorted, $250 per ton; developed by one drift 160 feet long and four open cuts with ten-foot faces each.

**Osceola.**—(Extension of Laura); 300x1500 feet; situated in Bridal-veil Basin, three miles south-east of Pandora, Upper San Miguel district, and

located in June, 1882; owners C. D. Johnson and C. M. Ryan, both Pandora; vein a fissure four feet wide, pay streak from ten to twelve inches, containing gold and silver bearing quartz, assaying from $40 to $50 per ton; developed by one twenty-foot open cut with a twelve-foot face.

**Osceola and Gold Crown**—Two claims, 300x1500 feet each; situated on the south slope of Silver Mountain, one mile north of Ophir, Iron Springs district, and located in 1877, and in process of patent; owner J. W. Bailey, Denver, and others; veins both fissures from ten to thirty inches wide, containing gold quartz, milling, when sorted, $15 per ton; developed by two shafts 150 and 200 feet deep each, 250 feet of drifting, and one tunnel 100 feet long; output seventy-five tons.

**Ouray.**—300x1500 feet; situated in Ingram Basin, two miles south-east of Telluride, Upper San Miguel district, and located in September, 1881; owners J. W. McKee and Eli Loshbaugh, both Telluride; vein a fissure three feet wide, pay streak ten inches, containing quartz, galena, and gray copper, assaying from 75 to 100 ounces silver per ton; developed by one thirty-foot shaft.

**Ouray Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1877; capital stock $30,000, in 300 shares of $100 each, non-assessable; president, Wesley Chambers, Oil City, Pa.; secretary, J. T. Jones; treasurer, E. C. Bradley—both Bradford, Pa.; manager, Jacob Ohlwiler, Ouray; offices Ouray and Oil City; owns a two-thirds interest in the Smuggler, 300x1056 feet, one-half interest in the Cimarron, and all of the Bradley, the two last adjoining claims on the same vein, 300x1500 feet each; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district; located in 1876, and patented in 1877; veins both fissures, in the Smuggler from four to six feet wide, pay streak from eighteen to twenty-eight inches, averaging over twenty-four inches, containing quantities of native silver (as wire and massive), the ores of silver (as brittle and ruby silver and silver glance), associated with iron and copper pyrites and some galena and zinc blende in a quartz and silicate of manganese gangue, about six inches of which milling, when sorted, from 100 to 300 ounces silver and from one-half to six ounces gold per ton, and the entire pay streak averaging about fifty ounces silver and from one-half to one ounce gold per ton; output seventy-five tons shipped, and estimates show nearly, if not quite, $500,000 in sight; in the Cimarron and Bradley from four to six feet wide, containing free gold (as leaf and wire), silver (as leaf and wire), and a streak of galena and gray copper, with a gangue and vein-matter similar to the Smuggler, milling, when sorted, from 20 to 400 ounces silver and from one-tenth to twenty ounces gold per ton; developments on the entire property—one tunnel 200 feet long, one level 506 feet long, and two shafts 100 and 125 feet deep, with some other workings and considerable improvements.

**Palmyra Group.**—Three claims, 300x1500 feet each, viz.: Palmyra, St. Louis, and Como; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district; located in June, 1877; owners Joseph A. Watton and Michael Dowd, both Ames, and James McCraley, Telluride; veins all fissures from four to five feet wide, pay streaks from twelve to sixteen inches, containing gold and silver bearing quartz, milling, when sorted, $200 per ton; developed by one tunnel 360 feet long and two open cuts, with fifteen-foot faces each.

**Pandora and Oriental Mining Company (The).**—Incorporated under the laws of France and of Colorado, in August, 1880; capital stock $250.000, in 2,500 shares of $100 each, non-assessable; board of directors, B. Premsel, chairman, Paul Mirabaud, —— Herpin, and —— Molinos, Paris, France, and P. E. Medley, London, England; general manager, C. Laforgue,



Pandora; offices 56 Rue de la Victoire, Paris, and Pandora; owns the Pandora and Oriental, two adjoining claims on the same vein; claims 300x1500 feet each; situated in Marshall Basin, one mile north-east of Pandora, Upper San Miguel district; located in 1876, and patented in 1880; vein a fissure five feet wide, containing gold-bearing quartz, carrying a little silver, yielding well; developed by one cross-cut 170 feet long, 1,600 feet of drifting, and 400 feet of winzes; improvements—2,000 feet of covered track, six feet wide, running along the side-hill and connecting the entrance to the mine with the upper end of an incline plane 600 feet long, made of rails, with a switch of four rails in the center, from the foot of which incline plane starts a wire-rope tram-way 2,800 feet long, by which the ore from the mine is delivered at the Company's mill (built by Fraser & Chalmers, Chicago), situated on Marshall Creek; building 85x95 feet, intended to contain forty Stamps and sixteen Frue Vanners, and two Blake Crushers, only twenty, eight, and one of which, respectively, are in use, but all are on the ground; motive power supplied by a 120-horse-power engine, 18x36, the fly-wheel of which weighs eight tons, and two boilers, in the winter, and by a Leffel turbine Wheel, with 100 feet head, in the summer; capacity from forty to fifty tons per day; telephone connects the mine and the office, and special electric bells along the line of the tram-way insure good working—and store-house, cabins, boarding-house, etc.

**Pagoda.**—(See Triumph and Pagoda.)

**Parsons Group.**—Three claims, 300x1500 feet each, viz., Parsons, Gopher, and Susan Emma; situated on the north slope of Yellow Mountain, one-half mile south-west of Ophir, Iron Springs district; located in 1879, and patented in 1883; owners Mark Folsom, Ames, Geo. H. Towle, Boston, and Chas. H. Jordan, Wakefield, Mass.; veins all fissures, five feet wide each, pay streaks from ten to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by two cross-cut tunnels 200 and 160 feet long and two drifts 100 and 125 feet long, and some other workings; output 200 tons.

**Pay-Rock.**—300x1500 feet; situated in Ingram Basin, four miles north-east of Telluride, Upper San Miguel district; located in October, 1881; owner Ed. Henry, Telluride; vein a fissure, four feet wide, pay streak twenty-five inches, containing galena and gray copper in quartz, carrying gold, assaying $45 per ton; developed by three open cuts with ten-foot-faces.

**Pay-master Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1882; capital stock $150,000, in 1,500 shares of $100 each, non-assessable; president, C. L. Webb, Denver; secretary, E. G. Segnor; treasurer, D. A. Beidler—both Rico; vice-president, H. H. Crone; manager, J. H. Alderson—both Silverton; owns four claims, 300x1500 feet, viz., Pay-master, Carbonate King, and Burt; situated on Wilson Creek, one and one-half miles from Trout Lake, and the Sheep Mountain, three miles from Trout Lake, all Iron Springs district; located in 1881; veins all fissures, from one to four feet wide, pay streaks from five to twenty inches, containing quartz, galena, gray copper, and some brittle silver, assaying from twenty-five to seventy-five ounces silver per ton; developments—150 feet of cross-cut tunnels and open cuts.

**Pemlico.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in 1880; owners C. F. and R. S. Painter, both Telluride; vein a fissure, three feet wide, of quartz and galena; developed by one thirty-foot open cut.

**Philadelphia Group.**—Four claims, viz.: Philadelphia, 300x780 feet, and White Horse, Tacony, and Moore, 300x1500 feet each; situated in West Bridal-veil Basin, five miles south-east of Telluride, Upper San Miguel district, and located in June, 1882; owner A. Snyder, Ophir; veins all fissures from two to five feet wide, in Philadelphia all mineral, and in the others pay streaks five inches wide, containing gold and silver bearing quartz, assaying $75 per ton; developed by one forty-one-foot tunnel and three open cuts with faces from ten to sixteen feet.

**Pioneer.**—(See Dolobran Mining Company.)

**Pitkin.**—300x1500 feet; situated on the south slope of Silver Mountain, one mile north-east of Ophir, Iron Springs district, and located in October, 1882; owners T. S. Walton, St. Louis, H. F. Kincaid, Silverton, and Maurice McHalpin, Ophir; vein a fissure fifteen feet wide, pay streak sixteen inches, containing a decomposed quartz, galena, and carbonates, assaying fifty-five per cent lead and forty ounces silver per ton; developed by one thirty-five-foot shaft.

**Pocahontas.**—300x1500 feet; situated on the west side of Bear Creek, two and one-half miles south of Telluride, Upper San Miguel district; located in August, 1881; owners M. D. L. Houston, B. F. Hyde, and Chas. Kayser, all Telluride; vein a fissure thirty inches wide, pay streak six inches, containing gold and silver bearing quartz, assaying $16 per ton; developed by three open cuts with ten-foot faces.

**Polar Star.**—300x1500 feet; situated on the south-west slope of Sheep Mountain Peak, four and one-half miles east of Trout Lake, Trout Lake district; located in July, 1881; owners F. W. Raymond, Louis Sherbino, and R. E. Bailey, all Rico; vein a fissure forty inches wide, pay streak from ten to fourteen inches, containing gray copper and galena, in a quartz gangue, milling, when sorted, 110 ounces silver per ton; developed by one tunnel thirty-five feet long.

**Porcupine.**—300x1500 feet; situated on the south fork of Turkey Creek, four miles north-east of Ames, Upper San Miguel district; located in October, 1880, and patented in March, 1883; owners W. R. Vanderveer and H. Weir, both Ames; vein a fissure three feet wide, pay streak from six to ten inches of galena, gray copper and quartz, assaying $150 per ton; developed by one tunnel forty-five feet long and an open cut with a fourteen-foot face.

**Powhattan.**—Owned by M. J. Alkire, Ophir, and others; claim 300x1500 feet; situated on the south slope of Silver Mountain, one-half mile north of Ophir, Iron Springs district; located in 1877; vein a fissure, from ten to twenty feet wide, pay streak from fifteen to twenty-five inches, containing gold-bearing quartz, milling, when sorted, $25 per ton; developments considerable.

**President and Constitution.**—Two claims, 300x1500 feet each; situated on the east side of Bilk Creek, nine miles west of Ames, Iron Springs district, and located in June, 1882; owners J. A. Hoisington and Alex. McCaw, both Ames; veins both fissures, thirty and seventy-five inches wide, pay streak four and ten inches wide, respectively, containing galena, gray copper, and quartz, assaying forty per cent lead and forty-five ounces silver per ton; developed by two open cuts with fourteen-foot faces each.

**Pride of the West.**—(See Lily, Pride of the West, etc.)



**Princess, Prince, and Yellowstone.**—Three claims, 300x1500 feet each; situated on the Koneman's Basin slope of Mineral Mountain Peak, four and a half miles east of Trout Lake, Trout Lake district, and located in April, 1881; owners W. A. Koneman, Trout Lake, A. and F. M. Melick, both Chicago, and others; veins all fissures from forty to fifty inches wide, pay streaks five inches, containing quartz, gray copper, and some galena, the ore in the Princess assaying 100 ounces silver and in the Prince fifty-five ounces per ton; developed by two tunnels fifteen feet long each and three open cuts with fourteen-foot faces.

**Providence.**—300x1500 feet; situated on the divide between Bear Creek and the San Miguel River, at Telluride, Upper San Miguel district, and located in March, 1883; owned by Chester Greenwood and E. Cole, both Telluride; vein a fissure, seven feet wide, pay streak fourteen inches, containing quartz heavily impregnated with copper carbonates; developed by a twenty-one-foot drift and an open cut with a seven-foot face.

**Pulaski.**—300x1500 feet; situated in West Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district, and located in October, 1879; owned by Jacob Young, Silverton, and others; vein a fissure twelve feet wide, pay streak twelve feet, containing gold-bearing quartz, milling, when sorted, $40 per ton; developed by two drifts fifty-two and thirty-one feet long and some other workings.

**Puzzle.**—300x1500 feet; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district, and located in July, 1879; owners J. Leonard and Henry Woods, both Telluride; vein a fissure four feet wide, pay streak nineteen inches, containing quartz, galena, and gray copper, assaying seventy-five ounces silver per ton; developed by one sixteen-foot drift and one ten-foot shaft.

**Quaker City.**—300x1500 feet; situated on the north side of the San Miguel River, six miles west of San Miguel City, Upper San Miguel district, and located January 7, 1883; owned by Geo. W. Donaldson and others, San Miguel City; vein a horizontal contact fifty feet thick of gold-bearing sandstone, easily treated, and milling from $6 to $8 per ton; developed by two open cuts with ten-foot faces.

**Queen Ann.**—300x1500 feet; situated on the east side of Bear Creek two miles south-east of Telluride, Upper San Miguel district, and located in August, 1882; owners L. P. and W. T. Flowers, J. H. Haynes, John A. Adams, and A. S. Cowling, all Telluride, and R. C. J. Pendleton, Indianapolis, Ind.; vein a fissure three feet wide, pay streak sixteen inches, containing free-milling gold-bearing quartz, assaying $75 per ton; developed by one tunnel twenty-five feet long.

**Queen Mary.**—300x1500 feet; situated on the south slope of Silver Mountain, two and one-half miles north-east of Ophir, Iron Springs district, and located in June, 1880; owners Augusta Page & Bros., Boston; agent, J. W. Kernahan, Ophir; vein a fissure twenty-two inches wide, pay streak five inches, containing spar and gray copper, assaying sixty ounces silver per ton; developed by one thirty-foot shaft and one twenty-foot tunnel.

**Raven and Columbia.**—Two claims, 300x1500 feet each, crossing each other; situated on the Koneman's Basin slope of Sheep Mountain Peak, four and one-half miles east of Trout Lake, Trout Lake district; located in June, 1881; owners W. A. Koneman, Trout Lake, and A. and F. M. Melick, both Chicago, and others; veins both fissures, five feet wide, pay streak from

twelve to sixteen inches, containing quartz and sulphurets with native sulphur, assaying eighty ounces silver per ton; developed by three open cuts with faces from twelve to fourteen feet and one twenty-two-foot shaft.

**Red Cloud.**—300x1500 feet; situated in Marshall Basin, five and one-half miles east of Telluride, Upper San Miguel district; located in April, 1878, and patented in 1879; owners Jno. W. Strayer, Ouray, Ed. Henry and D. N. Clark, both Telluride; vein a fissure, six feet wide, pay streak from ten to twenty-four inches, containing galena in quartz carrying gold, assaying $75 per ton; developed by two twelve-foot open cuts and one fifty-foot cross-cut tunnel.

**Red Cross Placers.**—Two claims, 160 acres each, viz., Saw-pit and Deep Creek; situated on the San Miguel River, two miles south-east of Placerville, Lower San Miguel district; located in 1876; owners W. H. Trout and E. N. McClain, both Telluride, Geo. B. Lake, Topeka, Kas., Becker Folsom, J. S. Kerr, and D. H. Ehman, all McPherson, Kas., and J. H. Haverly, Chicago; developments—$600 worth of ditching on each claim; production about the same as the Kimball and Wheeler placers.

**Red Cross Tunnel Company (The).**—Incorporated under the laws of Colorado, in January, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and general manager, J. H. Haynes; vice-president, L. B. Dewey; secretary and treasurer, J. C. Brown—all Telluride; office Telluride; owns the Red Cross Tunnel site, 3000x6 feet; situated on the east side of Marshall Creek, two miles east of Telluride, Upper San Miguel district; located in January, 1882; on which a tunnel is driven 250 feet in length; and the Red Cross Mill site, five acres, adjoining the tunnel site.

**Revenue.**—(See Dolobran Mining Company.)

**Rietta.**—300x1500 feet; situated in Deer Basin, four miles south-east of Telluride, Upper San Miguel district; located in August, 1882; owner Byron Lucas, Telluride; vein a fissure, twenty inches wide, pay streak six inches, containing gold-bearing quartz carrying some silver, assaying $21 per ton; developed by one ten-foot-face open cut.

**Rob Roy.**—300x1500 feet; situated on the south fork of Turkey Cre ek, three miles north-east of Ames, Upper San Miguel district; located in 1877; owner Jno. L. Hall, Silverton; vein a fissure four feet wide, pay streak from six to eight inches, containing galena and gray copper in quartz, milling, when sorted, from 50 to 100 ounces silver per ton; developed by one thirty-five-foot shaft.

**Robert E. Lee.**—(See Little Clara and Robert E. Lee.)

**Rock Islander.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-half miles north-west of Ophir, Iron Springs district; located in September, 1881, and patented in October, 1882; owners R. Dunkelberger, Ogden, Ia., and Hiram Smith, Ames; vein a fissure forty inches wide, with two pay streaks ten and three inches wide, containing galena and gold quartz, milling, when sorted, $60 per ton; developed by one sixty-five-foot cross-cut tunnel and some other workings.

**Rosa Lee.**—(Extension of Nevada); 300x1500 feet; situated on the north slope of Yellow Mountain, one mile south-east of Ophir, Iron Springs district; located in May, 1881; owned by Samuel H. Twigg, Red Mountain Town, Wm. Kennedy, Chas. Barton, and others, all Ophir; vein a fissure two feet wide, pay streak ten inches, containing quartz, galena, and gray copper,



assaying twelve per cent lead and seventy-five ounces silver per ton; developments—one twenty-five-foot tunnel, cutting vein twenty-five feet deep, and a drift eighteen feet long.

**Rosebud.**—(Extension of Bo-Peep); 300x1500 feet; situated in Ingram Basin, three and one-half miles east of Telluride, Upper San Miguel district; located in August, 1881; owners F. D. Margowski and H. D. McGillvray, both Telluride; vein a fissure four feet wide, pay streak from eight to twelve inches, containing galena, copper pyrites, and quartz, assaying seventy-five ounces silver per ton; developed by four levels, fifteen, ten, twenty, and ten feet long.

**Red Jacket.**—(See Winnamucca and Red Jacket.)

**Royal and Keno.**—(Extension of Water-fall); two claims, 300x1500 feet each; situated in Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district; located in 1878; owners T. E. Breckenridge & Sons, Silverton; vein a fissure, sometimes thirty feet wide at the outcrop, and known to be twelve feet wide, containing galena in quartz, the mineral generally appearing in streaks from twelve to twenty-four inches in width, assaying fifty ounces silver per ton; developments—two open cuts with sixteen-foot faces each, one on each claim.

**Ruby.**—300x1500 feet; situated on the east fork of Bear Creek, four and one-half miles south of Telluride, Upper San Miguel district; located in August, 1880; owners Geo. N. Hyde and A. B. Cooper, both Telluride, E. L. Davis, Rico, and Jacob Menderson, Cincinnati, O.; vein a fissure fourteen inches wide, containing chalcopyrite, galena, iron pyrites, and quartz, assaying an average of $75 per ton; developed by 150 feet of tunneling and some other workings.

**Ruby Queen and Gypsy Queen.**—Two claims, 300x1500 feet each; situated on Mill or Park Creek, two and one-half miles north of San Miguel City, Upper San Miguel district; located in July, 1880; owners L. G. Denison and O. C. Thomas, both Telluride, L. M. Remine, San Miguel City, J. A. Hirsch, Springfield, Mo., and C. H. Harter, Niles, Mich.; veins both fissures, twelve and six feet wide, respectively, containing quartz with galena and gray copper, assaying 121 ounces silver and some gold per ton; developed by one tunnel ninety feet long

**St. Julien.**—Owners F. H. Miner, Red Mountain Town, and C. J. Bergundthal, Denver; claim 300x1500 feet; situated on the east side of Bear Creek, two miles south-east of Telluride, Upper San Miguel district; located in 1881; vein a fissure thirty inches wide, containing gold and silver bearing quartz, assaying $160 per ton; developments—two open cuts with ten-foot faces each.

**St. Julien and Maud S.**—Two claims, 300x1500 feet each; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district; located in August, 1880; owners Jos. A. Watton and Michael Dowd, both Ames, and Geo. A. Bute, Pueblo; veins both fissures, eight and five feet wide, respectively, pay streaks twenty-five and fifteen inches, containing gold and silver bearing quartz, milling, when sorted, from $100 to $125 per ton; developed by one seventy-five-foot tunnel and one twenty-five-foot shaft.

**St. Louis.**—(See Palmyra Group.)

**St. Louis and Lower San Miguel Placer Mining Company.**—Incorporated under the laws of Colorado, in August, 1878; capital $200,000, in 2,000 shares of $100 each, non-assessable; president, Dr. Jno. Pitman; secretary, Henry T. Mudd; treasurer, Dr. ——— Hodges—all St. Louis; office Placerville; owns Bar No. 1 (placer), 160 acres; situated on the south side of San Miguel River, one and a fourth miles east of Placerville, Lower San Miguel district, and located in 1876; production probably twenty-eight cents per cubic yard; developed by three and five-eighths miles of fluming, three feet square, 380 feet of sluicing, 480 feet of iron pipe, forty-two inches at the head and narrowing to sixteen inches in width at the other end; worked by one Giant; output $1,200 in the nine days that the property was worked.

**San Juan.**—300x1500 feet; situated on the south-west slope of Yellow Mountain, a couple of hundred feet above Lake Fork Creek, convenient to the Rico and Ames wagon road, one mile north-east of Trout Lake, and one and a half miles south-east of Ames, Iron Springs district, and located in 1877; owners H. O. Horne, Trout Lake, Joseph Cuenin and Mrs. C. J. Rouech, both Gunnison City; vein a fissure nine feet wide of galena, gray copper, brittle silver, and sulphurets; ina quartz and spar gangue intermixed, milling, when sorted, twenty-five per cent copper, $17 in gold, and ninety ounces silver per ton; developments—four drifts, 280, 290, 120, and 30 feet in length, one sixty-foot shaft, and one twenty-foot drift, with some other workings, exposing large ore-reserves, the same improving with depth, there being apparently two mineral streaks converging together, one of which contains a galena and sulphuret ore, and the other a gray copper, both yielding well; improvement—ore-house, boarding-house, etc., and in addition an abundance of excellent timber.

**San Miguel and Valley Placers.**—Two claims, 160 acres each; situated on the San Miguel River, five miles west of Telluride, Upper San Miguel district, and located in August, 1880; owners Wm. H. Wheeler, Ames, Henry H. Hart and S. D. Batchelder, both Placerville, Chas. A. Wheeler and W. D. Wheeler, both Ouray, and F. C. Taylor, Denver; developed by one shaft forty feet deep and one-fourth mile of ditch; production probably twenty-five cents per cubic yard.

**San Miguel Concession (The).**—Incorporated under the laws of Great Britain in July, 1882; capital stock $30,000, in 1,200 shares of $25 each; board of directors: Geo. Reavely, Q. C., chairman, J. B. Akroid, M. E., Sam'l Roberts, Esq., A. H. Ruegg, Esq., and H. L. Vaughan, Esq., all London, Eng.; bankers, Alliance Bank, limited, London; consulting engineer, Thos. Curry Gregory, Eng.; solicitors, Francis & Johnson, 22 Austin Friars, London; secretary, L. K. Church; offices Queen's Building, 46 Queen Victoria street, London, E. C.; manager, Capt. Wm. Maclachlan, Pandora; owns the Little Mary Group, six claims, 300x1500 feet each, viz.: Star of the West, Little Mary, Whale, Little Annie, Bonny, and Pandy; situated in Marshall Basin, two miles north of Pandora, Upper San Miguel district, and located in July, 1881; vein a fissure from six to eight feet wide, pay streak from eighteen to twenty eight inches, containing a tellurium and gold ore in a quartz gangue, milling, when sorted, $500 per ton; developed by two shafts seventy and forty feet deep, four tunnels from twenty to forty feet in length; improvements—two shaft-houses; output twenty-five tons during the progress of development.

**San Miguel Crushing and Sampling Works.**—Situated in San Miguel City; owner W. H. Strout, San Miguel City; building 44x50 feet; containing ten Stamps, one Frue Vanner, Grinding mill for sampling, Dodge Crusher, and motive power supplied by an eight-horse-power engine and an eight-horse-power boiler; capacity ten tons per day; and one Water-jacket Blast-furnace; capacity ten tons, making a total capacity of twenty tons per day.



**Santa Cruz.**—300x1500 feet; situated on the south slope of Silver Mountain, three-fourths of a mile north-west of Ophir, Iron Springs district; located in July, 1876, and in process of patent; owners C. H. Toll and Thos. Lowthian, both Denver, W. H. Gifford, Syracuse, N. Y., Wm. Middleton, Del Norte, and F. P. Brown, San Miguel City; vein a fissure four feet wide, pay streak from six to ten inches, containing sulphurets, bismuth silver, and galena, in a quartz gangue, milling, when sorted, from one to two ounces gold and 100 ounces silver per ton; developed by one cross-cut 260 feet long, 220 feet of drifting, and one shaft 120 feet deep; output sixty tons.

**Seventy-six.**—(Extension of the Union); 300x735 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in August, 1876, and in process of patent; owners F. J. Kramer and John Real, both Ophir, and Jno. Fallon, Chicago; vein a fissure, from four to ten feet wide, pay streak from eighteen to twenty-eight inches, containing antimonial silver, in the various forms in which that ore occurs, in a quartz gangue, milling, when sorted, from 75 to 400 ounces silver per ton; developed by one cross-cut tunnel 150 feet long and two shafts forty-five and thirty feet deep, with some other workings.

**Shamrock.**—(An extension of N. W. H., Jr.,); 300x1500 feet; situated on the Savage fork of Marshall Creek, four and one-half miles east of Telluride, Upper San Miguel district; located in July, 1877; owners A. C. Pierce and S. E. Church, both New York City; vein a fissure, ten feet wide, pay streak from ten to twenty inches, containing gold and silver bearing quartz, assaying $60 per ton; developed by one open cut and tunnel eighty feet long.

**Sheridan.**—(On Smuggler vein); 300x1500 feet; situated in Marshall Basin, five miles north-east of Telluride, Upper San Miguel district; located in 1875, and patented in December, 1881; owner J. E. Friend, Milwaukee; manager, F. A. Wilde, Ouray; vein a fissure, from four to six feet wide, containing native silver (as wire and massive), and the ores of silver (as brittle and ruby silver and silver glance), associated with iron and copper pyrites and a small percentage of galena and zinc blende, the matrix of the ore being quartz and silicate of manganese, and the vein-matter porphyry accompanied by a streak of gold-bearing quartz, and the entire pay streak carrying more or less gold, and varying in width from eighteen to twenty-eight inches (averaging twenty-two inches), six inches of which mills, when sorted, from 100 to 400 ounces silver per ton, and from one-half to three ounces gold, the twenty-two inches averaging about fifty ounces silver and one-half ounce gold (the present workings, however, showing a chimney of mineral fully forty inches wide of a higher grade than that previously discovered); developments—two levels 300 and 120 feet long, connected by a sixty-foot winze, and considerable stoping; output 275 tons shipped, and 300 tons of low-grade ore sorted and sacked ready for shipment to the concentration-works.

**Sherman.**—300x1500 feet; situated in West Bridal-veil Basin, five and one-half miles north-east of Ophir, Upper San Miguel district; located in January, 1883; owners J. B. Ward, Chas. Pearson, J. Eckfeldt, Wm. Dana, and N. Lelong, all Ophir; vein a fissure forty inches wide, pay streak twenty inches, containing galena and zinc blende in quartz, milling, when sorted, sixty ounces silver per ton; developed by one tunnel 100 feet long and one shaft fifty feet deep from breast of tunnel.

**Silver Bell, No Name, and Hercules.**—Three claims, 300x1500 feet each; situated on the north slope of Yellow Mountain, two miles south-west of Ophir, Iron Springs district; located in 1879 and 1880; owner F. P. Mogenson, Ophir; veins all fissures from three to five feet wide, pay

streaks from four to twenty inches, containing galena and gray copper in quartz, milling, when sorted, 150 ounces silver per ton; developments—two drifts 300 feet long each, connected by a sixty-foot winze, one shaft fifty-five feet deep, and two tunnels 100 and 150 feet long, on the first, and one drift 150 feet long on the second, and one eighteen-foot shaft and one thirty-foot tunnel on the last; improvements—two ore-houses; output 150 tons.

**Silver Belt Mining Company (The).**—Incorporated under the laws of Ohio, in February, 1883; offices Youngstown, Ohio, and Ames; owns five claims, 300x1500 feet each, viz.: Minnie, Myrtle, Atlantic Cable, Cairo, Hecla, and Eldorado; situated on the south fork of Turkey Creek, four miles north-east of Ames, Upper San Miguel district; located in 1881 and 1882; veins all fissures forty inches wide each, pay streaks from four to fourteen inches containing galena, gray copper, and chlorides, in quartz, assaying seventy-five ounces silver per ton; developed by four levels, 350, 35, 65, and 10 feet long, and six open cuts with ten-foot faces each.

**Silver Chief, Wild Yankee, and Excelsior.**—Three adjoining claims on the same vein, 300x1500 feet each; situated on Bear Creek two and one-half miles south of Telluride, Upper San Miguel district; located in July, 1877; owners Geo. N. Hyde and A. B. Cooper, both Telluride, E. L. Davis, Rico, and Jacob Menderson, Cincinnati, Ohio; vein a fissure three feet wide, containing galena, chalcopyrite, and gray copper, in quartz, milling, when sorted, from $150 to $200 per ton; developed by one tunnel 124 feet long and two open cuts twenty-five feet long each.

**Silver Cup.**—300x1500 feet; situated on the crest of Yellow Mountain, three miles south-west of Ophir, Iron Springs district, and located in May, 1880; owners Geo. Priest, Ophir, and Chas. Dolph, Ames; vein a fissure five feet wide, pay streak from twenty to thirty inches, containing silver quartz, assaying twenty ounces silver per ton; developed by one thirty-five-foot shaft.

**Silver-Gold Mining Company (The).**—Incorporated under the laws of Kentucky, in November, 1882; capital stock $5,000,000; president, Robert Waring; vice-president, W. H. Lape; secretary, Edward W. Lape; treasurer, Thos. B. Youtcey—all Newport, Ky.; offices Newport and Pandora; owns fifteen claims, 300x1500 feet each, viz., Thos. B. Youtcey and Little Eva; situated in Marshall Basin, four miles north-east of Pandora, and located in August, 1881, and October, 1882; vein a fissure six feet wide, pay streak from ten to fifteen inches, containing quartz, galena, and gray copper, assaying $60 per ton; developed by two open cuts with fifteen-foot faces each; Patrick Henry and American Republic; situated at the mouth of Ingram Basin, one mile east of Pandora, and located in 1881; veins both fissures four feet wide each, pay streaks fourteen inches of gold-bearing quartz, assaying $8 per ton; developed by two open cuts with twenty-five-foot faces each; North Star, Polar Star, Tecumseh, Robert Waring, Commercial, Jno. Hancock, Robert Morris, Abe Lincoln, Wm. H. Lape, W. F. Johnson, and Birthday; situated in Bridal-veil Basin, from two to four miles south-east and south of Pandora, and located in 1881; veins all fissures from two to eight feet wide, pay streaks from four to twenty-eight inches of gold-bearing quartz carrying some silver, and assaying from $40 to $60 per ton; developed by eleven open cuts and tunnels from twenty-five to forty feet long each.

**Silver Heels.**—(See Great Eastern and Silver Heels.)

**Silver Mountain Mining Company (The).**—(Of New York); president, W. A. Strat; vice-president, J. G. Macy; treasurer, E. M. Archibald; secretary, J. G. Cameron; manager, Arthur Macy; assistant manager, C. P. Sawyer; owns the Alta mine, 300x1500 feet; situated in South



Turkey Creek Basin, four miles north-east of Ames, Upper San Miguel district; vein a fissure about four feet wide, containing streaks and pockets of gray copper and sulphuret ore in a quartz and spar gangue, intermixed with talc, and aggregating nine inches in width, milling, when sorted, twenty-five per cent lead and eighty ounces silver per ton; developments—three levels, 400, 150, and 160 feet in length, with connecting shafts and winzes, and some other workings; improvements—a substantial building 84x26 feet, used as a store and lodging-house, ore-house, boarding-house, etc.

**Silver Queen.**—300x1500 feet; situated on the north slope of Yellow Mountain, one mile south-west of Ophir, Iron Springs district; located September, 1880; owners Wm. B. Jefferson and Charles Montgomery, both Ophir; vein a fissure four feet wide, pay streak from five to fifteen inches, containing gray copper, black sulpurets, brittle silver, and some galena, in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by an eighteen-foot shaft, three fifteen-foot-face cuts, a cross-cut fifty feet long, and another cross-cut started to cut the vein at great depth.

**Silver Queen.**—300x1500 feet; situated on the south slope of Silver Mountain, three-quarters of a mile north-west of Ophir, Iron Springs district; located in September, 1878; owners Maurice McHalpin, E. D. Silsby, and J. C. Bates, all Ophir, and Jacob Ross, Silverton; vein a fissure four feet wide, pay streak eight inches, containing gold and silver bearing quartz, milling, when sorted, seventy-five ounces silver and one ounce gold per ton; developed by one cross-cut 142 feet long and one shaft 18 feet deep, with some other workings.

**Silver Spring Tunnel Site.**—3000x6 feet; situated on the south slope of Silver Mountain, in Fain Gulch, one mile north of Ophir, Iron Springs district; located in 1879; owners H. B. Adsit, David Swater, and J. F. Devine, all Silverton; on which a tunnel is now driven 450 feet long, designed to cut the veins in the following claims: Tender-foot, Great Eastern, Comet, Cayuga Chief, Auburn, Alhambra, and Ocean Wave, 300x1500 feet each; located in 1879, and in process of patent; in which the veins are all fissures, from four to eight feet wide, pay streaks from six to twenty-four inches, containing galena, gray copper, and sulphurets, in a quartz gangue, milling, when sorted, from 50 to 150 ounces silver per ton; developed by an open cut on each claim with faces from ten to twenty feet.

**Silver Star.**—300x1500 feet; situated in Marshall Basin, three miles north-east of Telluride, Upper San Miguel district; located in September, 1881; owners Chas. C. Ricker, J. M. Haist, and L. R. Blake, all Telluride; vein a fissure, eight feet wide, pay streak twenty-eight inches, containing gold-bearing quartz, assaying $50 per ton; developments—one open cut thirty-five feet long.

**646 and 647 Placers.**—160 acres each; situated on the lower end of Turkey Creek Mesa, three miles south-west of Telluride, Upper San Miguel district; located in August, 1882; owners J. H. Mitchell, J. R. Grant, and Thos. Sharpless, all Telluride, and others; there are fifty feet of gold-bearing gravel covering the entire ground, probably averaging ten cents per cubic yard.

**Smuggler.**—(See Ouray Mining Company.)

**Snow Boy.**—300x1500 feet; situated on the south slope of Silver Mountain one and one-half miles north-east of Ophir, Iron Springs district; located in 1880; owners A. V. Gorla, Rico, and Chas. Barton, Ophir; vein a fissure, three feet wide, pay streak from three to eight inches, containing gold-bearing quartz, assaying $50 per ton; developed by one tunnel seventy feet long.

**Snow-drift and Leftwick.**—Two claims, 300x1500 feet each; situated in Ingram Basin, four miles east of Telluride, Upper San Miguel district; located in July, 1880, and May, 1881, respectively; owners Jno. A. Adams, J. H. Haynes, and L. R. Blake, all Telluride, and E. L. Davis, Rico, and others; vein a fissure, ten feet wide, pay streak from twenty to twenty-five inches, containing galena in quartz carrying gold, milling, when sorted, $45 per ton in gold and silver; developed by one fifteen-foot tunnel and one twenty-foot shaft.

**South Forks Palcer.**—Sixty acres; situated on the south fork of Turkey Creek, immediately above its junction with the north fork, six miles south-west of Telluride, Upper San Miguel district; located in June, 1882; owners J. R. Lancaster, Chattanooga, Wm. Gillespie and J. C. Shafer, both Ames; developments—119 feet of ditching, 200 feet of fluming, with a natural reservoir covering five acres; worked by hydraulic pressure; production from fifty to sixty cents per cubic yard.

**South Forks Placers.**—Four claims, 160 acres each, viz.: Elgin, Turkey Creek, Quaking Asp, and South Forks; situated on Howard's Fork of the San Miguel River, beginning eighty rods from its mouth and extending three and one-half miles upwards, Upper San Miguel district; located from 1878 to 1880; owners J. W. Vance, Ames, Sylvester S. Mann, L. M. Kelly, and A. S. Goodrich, all Elgin, Ill.; developments—four miles of ditching, three adits from ten to eighteen feet in length, and one shaft fourteen feet deep; production probably twenty cents per cubic yard.

**Sow-Belly.**—300x1500 feet; situated on Mineral Mountain Peak, four and one-half miles east of Trout Lake, Trout Lake district; located in September, 1880; owner David Heindel, Lake City; vein a fissure three feet wide, pay streak from five to eight inches, containing quartz and galena, assaying fifty per cent lead and sixty-five ounces silver per ton; developed by one thirty-five-foot tunnel.

**Spar.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-half miles north of Ophir, Iron Springs district; located in 1878, and in process of patent; owners G. H. Ribble, R. E. Lawder, J. F. Llewellyn, and George W. Bausman, all Mexico, Mo.; vein a fissure thirty inches wide, pay streak from six to sixteen inches wide, containing galena and gray copper in quartz, milling, when sorted, 150 ounces silver per ton; developed by one tunnel forty feet long, one shaft from bottom of tunnel thirty-five feet deep, and 110 feet of drifting, and a cross-cut tunnel 385 feet long; output thirty tons.

**Staatsburg Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1878; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Jos. P. Hale, Boston; owns four claims, 300x1500 feet each, viz., Staatsburg and three others; situated on the south slope of Silver Mountain, in Staatsburg Basin, one mile north of Ophir, Iron Springs district; located in 1877; the Staatsburg patented, and the others in process; veins all fissures from six to eight feet wide, pay streaks from six to twelve inches, containing a sulphuret ore in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by four shafts averaging fifty feet in depth each, six shafts from fifteen to thirty feet in depth, and 100 feet of drifting; output fifty tons.

**Standard.**—300x1500 feet; situated in Bridal-veil Basin, four miles south of Pandora, Upper San Miguel district, and located in April, 1881; owners W. F. Johnson, Pandora, Fannie L. Harms, Cincinnati, Geo. W. Robson, Jr., John G. Stegman, and John A. Barker—all Newport, Ky.; vein a fissure



from three to six feet wide, with two pay streaks eight and five inches wide, containing gold-bearing quartz, assaying $125 per ton; developed by one ten-foot tunnel and one fifty-foot open cut.

**Star-gazer.**—300x1500 feet; situated on the top and south slope of Silver Mountain, two miles north-west of Ophir, Iron Springs district, and located in June, 1879; owners T. S. Wallon, St. Louis, F. C. Lawrence, Herbert E. Pack, and E. A. Wixon, all Durango; vein a fissure three feet wide, containing gold-bearing quartz, milling, when sorted, $25 per ton; developed by two shafts fifteen feet deep each.

**Stay-by and Mountain Belle.**—Two claims, 300x1500 feet each; situated on the south slope of Silver Mountain, three miles north-east of Ophir, Iron Springs district, and located in 1880; owners Augusta Page & Bros., Boston; agent, J. W. Kernahan, Ophir; veins both fissures, in the first five feet wide, pay streak eight inches, containing gold quartz, yielding fairly; and in the last twenty-five feet wide, pay streak three feet, containing galena and quartz, assaying ninety ounces silver per ton; developed by one thirty-foot drift, one sixty-foot tunnel, and one ten-foot shaft.

**Sulphurets.**—300x1500 feet; situated on the south slope of Silver Mountain, two miles north-west of Ophir, Iron Springs district; located in 1876, and patented in 1881; owners Frank Walker, Silverton, and —— Goddard, Saginaw, Mich.; vein a fissure five feet wide, pay streak five inches, containing a sulphuret ore in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by one tunnel 100 feet long; output probably twenty-five tons.

**Summit Mining Company (The).**—Incorporated under the laws of New York, October 11, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, L. V. Walkley, Plantsville, Conn.; secretary, L. J. Atwood, Waterbury, Conn.; treasurer, H. Chatfield, New Haven, Conn.; general manager, O. P. Posey; superintendent, J. R. Lattin—both Silverton; offices 262 Broadway, New York, and Silverton, Colo.; owns the Summit lode, 300x1500 feet; situated on the north slope of Silver Mountain, two miles north-west of Ophir, Iron Springs district, and located in 1874, and patented in 1882; vein a well defined fissure, five feet wide, pay streak from ten to thirteen inches, containing galena and some sulphurets in a quartz gangue, milling, when sorted, twenty-two per cent lead and eighty ounces silver per ton; developed by two levels 700 and 500 feet long, with connecting shafts and winzes, and considerable stoping, all on the vein, and one tunnel 500 feet long, cutting vein 800 feet deep; output in 1882—34,850 ounces of silver and 188,600 pounds of lead.

**Sunflower.**—300x1500 feet; situated on the south slope of Silver Mountain, one-fourth mile north of Ophir, Iron Springs district, and located in January, 1882; owners T. S. Walton, St. Louis, and Maurice McHalpin, Ophir; vein a fissure, six feet wide, pay streak from ten to twelve inches, containing carbonates in a decomposed gangue, assaying ten ounces silver per ton; developed by one twelve-foot shaft.

**Sunshine, Bear, and Tiger.**—Three claims, the first and last named adjoining each other on the same vein, 300x1500 feet each; situated on Sunshine Mountain, one mile south-east of Ames, Iron Springs district, and located in 1880; owners Paul Rodenhouse, Silverton, Chas. Kretzschmar, Ames, and Wm. Snider, Milton, Ky.; veins both fissures, four feet wide each, pay streaks ten and fifteen inches wide respectively, containing a fair material, assays on the Bear showing forty ounces silver per ton; developments—assessment work.

**Sylph.**—(See Upper San Miguel G. & S. M. Co.)

**Taddy Addler.**—300x1500 feet; situated on the south slope of Silver Mountain, one-fourth mile north or Ophir, Iron Springs district; located in November, 1880; owned by Samuel H. Twigg, Red Mountain Town, Geo. W. Bausman, Silverton, and Wm. Kennedy, Ophir; vein a fissure, three feet wide, containing gold-bearing quartz, assaying $10 gold and ten ounces silver per ton; developments—twenty-foot shaft and ten-foot tunnel designed to cut vein 100 feet deep.

**Tail Holt Group.**—Three claims, 300x1500 feet each, viz., Tail Holt, June Bug, and Home-stake; situated on the north side of San Miguel River, one-half mile west of San Miguel City, Upper San Miguel district; located in January, 1883; owners David M. Cooper and Buckley Linds, both San Miguel City; vein a horizontal contact, fifty feet thick, of gold-bearing sandstone, easily treated, and milling from $6 to $8 per ton; developed by four open cuts with fifteen-foot faces each.

**Terrible.**—300x1500 feet; situated on the north-west slope of Yellow Mountain, three miles south-west of Ophir, Iron Springs district; located in October, 1877, and in process of patent; owners Peter Peterson, Ophir, and Canute Benson, Silverton; vein a fissure, forty inches wide, pay streak from five to nine inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from 150 to 175 ounces silver per ton; developed by one level 175 feet long, with 100 feet of drifting from end of level, one cross-cut ninety-two feet long, and some improvements; output twenty tons.

**Texas and Belcher.**—Two claims, 300x1500 feet each; situated on the south slope of Silver Mountain, one-half mile north of Ophir, Iron Springs district; located in February, 1878, and June, 1877, and the last patented in 1882; owners E. D. Silsby, Ophir, J. R. Curry, Silverton, and F. H. Whitney, Atlantic, Ia.; veins both fissures twelve feet wide each, pay streaks fifteen inches, containing galena in quartz, carrying gold and silver, assaying $30 per ton; developed by two open cuts with fifteen-foot faces each and one drift sixty-five feet long.

**Thornburg Mining Company (The).**—Incorporated under the laws of Colorado in 1881; capital stock $200,000, in 40,000 shares of $5 each, non-assessable; secretary, Patrick Donovan; treasurer, John Bailey; manager, John G. Williams—all Boston, Mass.; offices Boston and Ophir; owns five claims, 300x1500 feet each, viz.: Honduras, Nellie J., Elbunster, Moon, and ——; situated in Water-fall Basin, one-half mile south of Ophir, Iron Springs district; located in 1878, and the first three in process of patent; veins all fissures from twenty to thirty inches, containing galena and gray copper in quartz, carrying gold, the former milling, when sorted, 150 ounces silver per ton, and the latter $30 pert on; developed by one drift sixty feet long and two cross-cuts sixty and seventy-five feet long, and one shaft forty feet deep; and Boston and Slide Rock, 300x1500 feet each, situated in Prospect Basin, three miles south of San Miguel City, Upper San Miguel district; located August, 1878; veins both fissures four feet wide each, pay streaks from eight to twelve inches, containing quartz and sulphurets, assaying $125 per ton; developed by one forty-foot shaft, and by the Monticello tunnel, in which the Company owns one-half interest (see Monticello).

**Tidal-wave.**—(See Ophir Needles Mining Company.)

**Tiger.**—(See Sunshine, Bear, and Tiger.)

**Tip-top.**—(See Duquesne Mining Company.)



**Tip-top.**—300x1500 feet; situated on the east side of Bear Creek, two miles south of Telluride, Upper San Miguel district, and located in August, 1882; owner Dr. H. H. C. Kay, Telluride; vein a fissure, six feet wide, pay streak from two to three inches of gold-bearing quartz, assaying $200 per ton; developed by one ten-foot tunnel.

**Tri-Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in March, 1882; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, Jno. Gale; vice-president, Henry Folsom; treasurer, Peter Becker; general manager, Jno. T. Handy—all Boston; offices 33 School street Boston; owns Boston Sailor Boy and Little Annie; situated in Swamp Cañon, three and a half miles south-east of Ophir, Iron Springs district, and located in June 1880; veins all fissures, from two to three feet in width, containing galena in quartz, carrying gold, assaying $40 per ton; developed by three cross-cut tunnels, 250, 300, and 20 feet long, and an incline shaft 30 feet deep.

**Triumph and Pagoda.**—Two claims, 300x1500 feet each; situated in Silveride Basin, four miles north-east of Telluride, Upper San Miguel district, and located in 1879; owners R. Morrison, Jr., and Willard J. Kling, both Silverton, C. S. York, Red Mountain Town, and Geo. Rohwer, Telluride; veins both fissures, one to three feet wide, respectively, containing galena and gray and yellow copper in quartz, milling, when sorted, $100 per ton; developed by two open cuts, one on each lode, with twenty-five-foot faces.

**Trout Lake Mining Company (The).**—Incorporated under the laws of Illinois, in January, 1883; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, A. Melick; vice-president, L. Todd; secretary, W. J. Melick; treasurer, B. J. Young—all Chicago; owns five claims, 300x1500 feet each, viz.: Mountain Queen, Yellow Jacket, Hidden Treasure, Little Chief, and Vermilion; situated in Koneman's Basin, and on Mineral Mountain Peak, four and one-half miles east of Trout Lake, Iron Springs district, and located in September, 1880; veins all fissures from two to eight feet wide, pay streaks from two to twenty inches in width, containing galena, gray copper, sulphurets, and brittle silver, in a quartz gangue, milling, when sorted, 100 ounces silver per ton; developed by four tunnels, 154, 42, 33, and 40 feet long, and fifteen open cuts on the veins averaging fourteen feet in width each.

**Turkey Creek Mill.**—Owner S. E. Church, New York City; superintendent, Richard Cogar, San Miguel City; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City; building 22x50 feet, containing one Alden Rock-breaker (pea and dust size), capacity fifty tons, Hoyt Pulverizer, Copper Plates, Howland Riffles, Pumps, etc.; motive power supplied by one thirty-horse-power engine and a forty-horse-power boiler.

**Turkey Creek Mines.**—Ten claims, 300x1500 feet each; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district; located in June, 1877, and in process of patent; Turkey Creek, Black Iron, Lexington, Harriet Lane, Silver Cloud, West Virginia, Norfolk, Sunnyside, Lucille, and Vienna; owner S. E. Church, New York City; superintendent, Richard Cogar, San Miguel City; veins all fissures from six inches to six feet wide, containing gold and silver bearing quartz, milling, when sorted, $30 in gold and eighty ounces silver per ton; developed by two tunnels 310 and 134 feet long, connected by a ninety-five-foot winze, and ten open cuts with faces from ten to twenty feet each; output 400 tons; improvements—ore-chute and boarding-house.

**Turkey Creek.**—(See South Fork Placers.)

**Turkey Creek Placer.**—160 acres; situated on the north fork of Turkey Creek, seven miles south-west of San Miguel City, Upper San Miguel district, and located in August, 1881; owners F. R. Hamilton, J. C. Rutan, and Wm. Leeson, all San Miguel City, Jos. A. Watton and Michael Dowd, Ames, C. J. Hamilton, Muskegan, Mich., Arthur G. Sherman, Chicago, and Mary Rutan, Warren, Ohio; developments—2,000 feet of ditching and one house on the property.

**Uncle Sam.**—300x1500 feet; situated on the north-west slope of Yellow Mountain, one and one-half miles south-west of Ophir, Iron Springs district, and located in May, 1881; owners Aaron Jones, Owen Connors, and Mark Folsom, all Ames, and Orrin Parsons, Ophir; vein a fissure four feet wide, pay streak three inches, containing gray copper and quartz, assaying 100 ounces silver per ton; developed by one fifteen-foot-face cut and one seven-foot shaft.

**Union.**—(See Dolobran Mining Company.)

**Union Placer.**—160 acres; situated at the mouth of Bear Creek, and running upward, from one-half to one mile south-east of Telluride, Upper San Miguel district; located in 1879, and in process of patent; owned by J. H. Mitchell and others, Telluride; production probably twenty cents per cubic yard; developments—250 feet of ditching and fifty feet of iron piping, with facilities for working one Giant, the owners having the entire water-right of Bear Creek.

**Uno.**—(See Mendota and Uno.)

**Upper San Miguel Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in —— 1881; president, A. T. Nichols, Corunna, Mich.; secretary and treasurer, Jno. B. Corliss, Detroit, Mich.; office Detroit, Mich., and Telluride; owns sixteen claims, 300x1500 feet each, viz., Sylph, Crystal, Forest City, Damon, Oro, Bonita, Louise, Little Darling, Orion, Maggie Wertz, and others, and an interest in the Euclid Avenue (see Euclid Avenue); all situated on Bear Creek, from three to four miles south of Telluride, Upper San Miguel district; located in 1878, and partially in process of patent; veins all fissures, from one-half to five feet in width, pay streaks from one to fifteen inches, containing gold-bearing quartz, milling, when sorted, about $30 per ton; developments—one sixty-eight-foot level on the Sylph, one level 100 feet long on the Crystal, and one level on each of the others from ten to thirty feet in length, and some other workings.

And owns a stamp-mill (built by Fraser & Chalmers, Chicago), adjoining the mines, containing ten Stamps, with steam motive power.

**Valley View.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-half miles north-west of Ophir, Iron Springs district; located in 1877, and in process of patent; owners Henry Clark and Robert Nelson, both Montgomery, Mo., and Richard Gentry, Kansas City, Mo.; vein a fissure, four feet wide, pay streak five inches, containing a galena and sulphuret ore in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by 200 feet of drifts and some other workings; output seventy-five tons.

**Vergennes and Water-fall.**—Two claims, 300x1500 feet situated on the north slope of Yellow Mountain, 600 feet south of Ophir, Iron Springs district; located in June, 1878; owners Jno. and Michael Real, J. D. McDermott, and J. D. Fletcher, all Ophir; veins both fissures, forty inches wide each, pay streak in the former from three to four inches, containing gray copper and quartz, assaying from $200 to $250 per ton, and in the latter five inches, containing galena and quartz, assaying $34 per ton; developed by two drifts thirty-five and forty feet long.



**Verona.**—(See Climax and Verona Group.)

**Viola.**—Owners G. W. Henry and others, Lake City; claim 300x1500 feet; situated on the east side of Bear Creek, two miles south-east of Telluride, Upper San Miguel district; located in July, 1879; vein a fissure, with two pay streaks twelve inches wide each, containing gold and silver bearing quartz, milling, when sorted, $100 per ton; developments—one open cut with a fourteen-foot face and two tunnels twelve and twenty-five feet long.

**Vulcan.**—(An extension of Butler); owned by H. W. Butler, Ames; claim 300x1500 feet; situated on the north-west slope of Yellow Mountain, one and one-half miles south-west of Ophir; vein a fissure, twenty feet wide containing quartz with galena and gray copper scattered through it, and assaying fairly; developed by one thirty-foot shaft and one twenty-foot cross-cut from the bottom of the shaft.

**Wabash.**—300x1500 feet; situated on the west slope of Yellow Mountain, two miles south-west of Ophir, Iron Springs district; located in July, 1881; owners Peter Peterson, Ophir, and Wm. J. Phillips and Geo. E. Harman, both Chicago; vein a fissure five feet wide, pay streak ten inches, containing gold-bearing quartz, assaying fairly; developed by one thirty-five-foot shaft.

**Wabash.**—(Extension of Fortuna); 300x700 feet; situated in Ansborough Basin, five miles east of Telluride, Upper San Miguel district; located in 1882; owner James R. Grant, Telluride; vein a fissure four feet wide, pay streak twenty inches, containing galena and gray copper and quartz, assaying from 50 to 100 ounces silver per ton; developed by one tunnel twenty feet long.

**Ware Bar Group.**—Three placers, viz.: Ware Bar, Extension of Ware Bar, and Wells and Egan, covering 64, 77, and 139 acres, respectively; situated on the San Miguel River, adjoining Placerville, Lower San Miguel district; located in 1876, and the first and last patented; owners A. D. Williams, Anthony Ittner, and L. A. Pratt, all St. Louis, Mo.; developments—one-quarter mile of ditching; production probably thirty cents per cubic yard.

**Warsatche.**—300x1500 feet; situated on the divide between La Junta and Bear Creek Basins, two and one-half miles south-east of Telluride, Upper San Miguel district, and located in 1878; owners W. H. Gabbert and W. T. McGarvey, both Telluride, S. S. Snyder, J. C. and W. H. Weller, F. C. La Blonde, Christopher Schunk, L. Jones, and D. J. Roop, all Celina, O.; vein a fissure, four feet wide, pay streak from eight to eighteen inches, containing gold-bearing quartz, assaying $85 per ton; developed by one open cut and tunnel fifty feet long.

**Water-fall.**—Owned by Chas. Newman and others, Durango; claim 300x1500 feet; situated in Bridal-veil Basin, five miles north-east of Ophir, Upper San Miguel district; vein a fissure from ten to thirty feet wide, with several pay streaks, containing gold quartz and galena, assaying $50 per ton; developments—assessment work.

**West Point and Ben. Franklin.**—Two claims, 300x1500 feet each; situated in Bridal-veil Basin, four miles south-east of Telluride,

Upper San Miguel district, and located in May, 1878; owners W. H. Trout, Telluride, and others; vein a fissure from ten to thirty inches, containing yellow copper and galena and quartz, assaying $65 per ton; developed by four twenty-foot open cuts and one ten-foot tunnel.

**Western View.**—300x1500 feet; situated in La Junta Basin, three miles south-east of Telluride, Upper San Miguel district, and located in August, 1880; owners W. G. Morrow, Silverton, and B. F. Ross, Ophir; vein a fissure six feet wide, pay streak from eight to ten inches, containing galena, assaying forty per cent lead and twenty ounces silver per ton; developed by one twenty-five-foot drift.

**Whale.**—300x1500 feet; situated in Marshall Basin, five miles east of Telluride, Upper San Miguel district; located in July, 1881; owners Ed. Henry and D. N. Clark, both Telluride; vein a fissure four feet wide, with two pay streaks six and three inches wide, containing gold-bearing quartz, assaying $40 per ton; developed by two open cuts with fifteen and ten foot faces.

**What-Cheer.**—(Extension of Nevada); 300x1500 feet; situated on the north slope of Yellow Mountain, one and one-fourth miles south-east of Ophir, Iron Springs district; located in August, 1876; owners Geo. H. Towle, Boston, M. M. Ross, Nevadaville, Ia., and Mark Folsom, Ames; vein a fissure four feet wide, pay streak from eight to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 110 ounces silver per ton; developed by several openings on the surface and one drift 150 feet long; output sixty tons.

**White Bear.**—300x1500 feet; situated in Ingram Basin, four miles from Telluride, Upper San Miguel district; located in June, 1880; owners C. W. and D. Umsted, both Telluride; vein a fissure four feet wide, containing quartz and galena, assaying twenty-five ounces silver per ton; developments—one sixty-foot tunnel and one fifteen-foot shaft.

**Wild Yankee.**—(See Silver Chief, Wild Yankee, etc.)

**Wilde Oscar.**—300x1500 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in February, 1883; owners Wm. Chisholm, Austin Rowe, Quinton Durwin, and Henry Bullock, all Telluride; vein a fissure forty inches wide, pay streak fourteen inches, containing gold and silver bearing quartz, assaying $50 per ton; developed by one shaft ten feet deep.

**Willamsport No. 1 and No. 2 Placers.**—Twenty acres each; adjoining Pandora, Upper San Miguel district; located in August, 1880; owner W. F. Johnson, Pandora; developed by 300 feet of ditching and three shafts ten feet deep each; production probably six cents per cubic yard, and bed-rock not yet reached.

**Willow Creek.**—300x1500 feet; situated on the north side of the San Miguel River, eight miles west of Telluride, Upper San Miguel district; located in June, 1882; owners M. D. L. Houston, G. W. Thompson, J. C. Barlow, Jno. Pierce, and Cyrus Bonler, all Telluride, and the Keystone Hydraulic Placer Mining Company; vein a fissure thirty inches wide, pay streak nine inches, containing quartz and galena, assaying twenty-five ounces silver per ton; developed by one ten-foot tunnel

**Windsor.**—300x1500 feet; situated on the south slope of Silver Mountain, one and one-fourth miles north of Ophir, Iron Springs district; located in 1881; owners S. R. Fitzgarrald and Jos. Bordeleau, both Ophir; vein



a fissure thirty inches wide, pay streak six inches, containing galena and gray copper in quartz, milling, when sorted, 100 ounces silver per ton; developed by one twenty-foot drift and two open cuts on the vein.

**Winnamucca and Red Jacket.**—Two claims, 300x1500 feet each; situated on the south slope of Silver Mountain, one-half mile north-west of Ophir, Iron Springs district; located in April, 1879; owners E. D. Silsby and M. J. Alkire, both Ophir; vein a fissure twelve feet wide, with two pay streaks ten inches wide each, containing gold-bearing quartz, milling, when sorted, $40 per ton; developed by two tunnels fourteen and seventy feet long and two open cuts with twelve-foot faces each.

**Winona.**—300x1500 feet; situated in Marshall Basin, four miles north-east of Telluride, Upper San Miguel district; located in 1878; owners P. H. Anderson, O. J. Davis, and J. W. Carpenter, all Ouray; vein a fissure seven feet wide, pay streak from nine to fifteen inches, containing galena and gray copper in quartz, carrying gold, assaying 150 ounces silver and $75 gold per ton; developed by one fifteen-foot-face open cut, one twelve-foot shaft, and one twenty-foot tunnel.

**Wolverine.**—300x1500 feet; situated at the head of San Miguel Park, three miles east of Telluride, Upper San Miguel district; located in August, 1882; owners Jno. D. Bennett, Wm. H. Martin, and Robert Holmes, all Telluride; vein a fissure forty inches wide, containing gold and silver quartz, assaying $30 per ton; developed by an open cut fifteen feet long.

**Ypsilanti.**—300x1500 feet; situated on the west slope of Ophir Mountain, two miles east of Ophir, Iron Springs district; located in January, 1883; owners Jno. Pinkerton and Geo. Williams, both Ophir; vein a fissure fifteen inches wide, pay streak from two to three inches, containing quartz and galena, assaying thirty-two per cent lead and forty ounces silver per ton; developed by one ten-foot-face open cut.

**Zampa.**—(On the Big Elephant vein); 300x1500 feet; situated in Marshall Basin, three and one-half miles north-east of Telluride, Upper San Miguel district; located in 1881, and patented in 1883; as well as a five-acre mill site adjoining; owned by H. W. and A. L. Reed, both Ouray; vein a fissure from ten to fourteen feet wide, pay streak from twenty to forty inches, containing galena, copper pyrites, and gold-bearing quartz, milling, when sorted, $60 per ton; developed by one fifteen-foot shaft and one forty-foot open cut.

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# Summit County.

This County lies west of the Continental Divide, and is bounded on the west by Eagle, on the north by Grand, on the east by Grand, Clear Creek, and Park, and on the south by Park and Lake Counties. It has an estimated population of 6,000, with Breckenridge as its county seat, and covers an area of 500 square miles, the greater portion of which is exclusively devoted to the pursuit of mining. True there are a few hay ranches, some grazing and timber land, and occasional indications of coal measures, but they are only convenient and limited accessories to the main industry.

The Ten-mile district, eighteen miles directly north of Leadville, and occupying the western end of the County, has attracted the greatest attention. It covers the mineral region on each side of the upper portions of Ten-mile Creek, and embraces the towns of Kokomo, Recen, Robinson, and Carbonateville. Its geological features are varied, being granitic, eruptive, and sedimentary. The veins are contacts, fissures, and gashes, the characteristics changing with the different formations. The contacts, as a rule, lie between dolomite below and metamorphic sandstone above, and are generally large, ranging from one to twelve feet in thickness. Their contents are mainly lead carbonates intermixed with iron carbonates and oxides in a dolometic gangue-matter, yielding, when sorted, from ten to sixty per cent lead and from 10 to 100 ounces silver per ton. In the fissure and gash veins the contents comprise the sulphides of iron, zinc, lead, and copper, all carrying more or less silver, and frequently some gold.

The division of the County lying east of the Ten-mile district, and embracing the towns of Montezuma, Chihuahua, Decatur, Breckenridge, Frisco, Dillon, Lincoln, etc., made a material increase of ore and bullion shipments in 1882, as compared with those of 1880 and 1881. It has a rail connection at Breckenridge over the D. & S. P. R'y, at Frisco over the D. & R. G., and at Dillon over both the D. & S. P. and D. & R. G. Seventy-three silver mines are reported in the list of shippers, the gross output aggregating nearly 5,000 tons, yielding from $75 to $100 per ton. Several gold-producing properties have had an output estimated at a total of about $30,000, and the placers at over $20,000. The lodes, with the exception of a few in the vicinity of Breckenridge, are fissures, in a granitic formation, and the ores consist of the sulphides of iron, copper, lead, zinc, bismuth, antimony, arsenic, etc., with some ruby and native silver, etc. The entire region is filled with low-grade and medium ores, and a fair proportion of those very rich. These facts, taken in connection with the railway facilities (the principal centers being already intersected and further extensions projected), show that the output will annually increase.

The output of Summit County from 1860 to 1881, as estimated by the Breckenridge *Leader*, is as follows: from 1860 to 1869 inclusive (placer production) $5,500,000, from 1870 to 1873 inclusive (placer and lode production) $531,000, in 1874 $126,408, in 1875 $122,413, in 1876 $350,000, in 1877 $190,000,

in 1878 $520,774, in 1879 $475,000, in 1880 $450,000, and in 1881 $3,250,000, giving it the fourth rank among the bullion-producing sections of the State, a position which it held in 1882. Its resources are, however, probably sufficient, if properly developed, to advance it to the second place.

**A. McDonald.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district; located in July, 1881; owner Archie McDonald, Jr., Alma; vein a fissure five feet wide, pay streak twelve inches of quartz, carrying gold, silver, and copper, milling, when sorted, from $100 to $400 per ton; developments—one tunnel 120 feet long.

**A No. 1.**—150x1500 feet; situated on the south slope of Humbug Hill, adjoining Lincoln City, Avalanche district; located in May, 1880; owner Fred. H. Eckhardt, Lincoln City; vein a fissure eighteen inches wide, containing galena, iron oxides, and quartz, assaying fifty per cent lead and thirty ounces silver per ton; developed by one thirty-foot level, one ten-foot shaft from level, and a cross-cut fifty feet long, designed to cut vein at depth of sixty-five feet.

**A. V. Fletcher and Center Point.**—Owned by A.V. Fletcher, Leadville, W. H. Bryant, Seth Crawford, Marion Fennell, Jas. Wright, Frank E. Wheeler, W. H. Burke, and W. A. Robbins, all Wheeler; claims 1500x150 feet each; situated on the east end of Copper Mountain, Ten-mile district, two and one-half miles from Wheeler; located in June, 1882; veins all contacts, from two to four feet in thickness, containing galena in a dolometic gangue; developed by two shafts forty and fifty feet in depth.

**Adder.**—Owned by E. M. Eggleston, Pitkin, G. W. Eggleston, Boulder, J. M. Conway, Breckenridge, and J. P. Davy, Austin, Tex.; agent, C. B. Eggleston, Montezuma; claim 1500x150 feet; situated on the west slope of Glacier Mountain, Snake River district, one-half mile from Montezuma; located in 1880; vein a fissure three feet wide, pay streak from four to twelve inches, containing galena, sulphurets, native silver, and quartz, assaying thirty per cent lead and from 150 to 450 ounces silver per ton; developed by a tunnel sixty feet long and a shaft twenty-two feet deep.

**Addie.**—W. C. Tompkins, Robinson, James Stewart and W. F. Dunham both Monarch, and Taylor & Ashton, C. C. Parsons, and others, all Leadville, owners; claim 1500x150 feet; situated on Sheep Mountain, Ten-mile district, one mile from Robinson; located in 1881; vein a contact four feet wide, containing galena and dolomite, assaying twenty-three per cent lead, forty ounces silver, and three-fourths ounce gold per ton; developed by a shaft nineteen feet deep and a fifty-foot incline.

**Addie and Obey.**—Two claims, 150x1500 feet each; situated on Tucker Mountain, one mile from Kokomo, Ten-mile district, and located in 1880; owners Oliver C. Obey, Leadville, Edward McClintock, Denver, and Jas. N. Carlile, Pueblo; vein a fissure, containing lead and iron carbonates and oxides, carrying silver, in a dolomite gangue; developed by one shaft 120 feet deep, passing through seventy feet of low-grade ore.

**Adelaide.**—Owned by H. Murrow and Wm. Sigafus, both Alma; claim 1500x150 feet; situated on North Star Mountain, Pollock district, seven miles from Alma; vein a fissure from eight to ten feet wide, containing gold-bearing quartz (stamp-rock) and iron pyrites (smelting-ore), assaying from $50 to $75 per ton; developed by a tunnel and open cut fifty feet in length.

**Adella M. and Sagamore.**—Owned by Geo. E. Kedzie, Chihuahua; claims 1500x150 feet each; situated on the east side of Elephant Gulch, Peru district, one-half mile from Decatur, and located in October, 1881; veins both fissures, in the former from two to four feet wide, pay streak from three to four inches, containing quartz, galena, and sulphurets, assaying thirty-two per cent lead and from 100 to 500 ounces silver per ton; and in the latter three feet wide, pay streak two feet, containing quartz and galena, assaying forty per cent lead and from ten to fifty ounces silver per ton; developed by four adits from ten to fifteen feet in length and one twelve-foot shaft.



**Aftermath Group.**—(See American Mining and Smelting Company.)

**Agassiz and Hawkeye.**—Two claims, 150x1500 feet each; situated on the north slope of Nigger Hill, one and one-fourth miles from Breckenridge, and located in 1879; owners Geo. W. Mumford and E. L. Baker, both Breckenridge; vein a contact five feet thick, containing lead carbonates and decomposed matter, assaying fifteen ounces silver per ton; developed by three shafts from fifteen to twenty-five feet in depth and one tunnel fifty feet long.

**Aggie, Ida, and Rena.**—Owned by George Puterbaugh and Wm. Kellogg, both Breckenridge; claims 1500x150 feet each; situated on Bald Mountain, Bald Mountain district, five miles from Breckenridge, and located in June, 1880; veins all contacts from three to six feet thick, containing lead carbonates and decomposed porphyry, assaying fifty ounces silver per ton; developed by three shafts from fifteen to fifty feet in depth and a sixty-foot incline.

**Aggie.**—Owned by H. H. Brown, Breckenridge, and D. H. Clute, Leadville; claim 1500x150 feet; situated on Bald Mountain, Bald Mountain district, three and one-half miles from Breckenridge; located in August, 1882; vein a contact seven feet wide, seamed with gold and copper bearing quartz, assaying from $40 to $80 per ton; developed by a shaft forty feet deep.

**Agog.**—150x1500 feet; situated at the head of Brown's Gulch, one mile from Lincoln City, Bevan district; located in March, 1881; owner Wm. H. Jones, Lincoln; vein a contact, with porphyry foot and slate hanging-wall two feet thick, containing quartz and galena; developments—one twenty-five-foot shaft.

**Aileen.**—(See Blanche and Aileen.)

**Ailce A.**—Owned by J. F. Willis and L. R. Vredenburgh, both Montezuma; claim 1500x150 feet; situated on the north-east slope of Bear Mountain, Snake River district, one-half mile from Montezuma; located in 1880; vein a fissure five feet wide, pay streak six inches, containing galena, zinc blende, and quartz, assaying forty per cent lead and three ounces silver per ton; developed by a drift on the vein forty feet long.

**Alice S.**—Owned by W. C. Tucker and J. Van Steenberg, both Kokomo; claim 1500x150 feet; situated on the east slope of Jacque Mountain, Ten-mile district, two miles from Kokomo; located June 11, 1882; vein a fissure four feet wide, containing quartz and galena; developed by a twenty-foot shaft and a thirty-five-foot incline.

**Aladdin.**—Owned by J. S. Mathew, Decatur, Daniel Doyle and Peter Kilkenney, both Georgetown, and B. B. Lawrence, Montezuma; claim 150x1500 feet; situated on the south-east slope of Doyle Hill, Peru district, three miles from Decatur; located in 1880, and in process of patent; vein a fissure, from four to five feet wide, pay streak from six to fifteen inches, containing galena and gray copper and quartz, assaying from 40 to 200 ounces silver per ton; developed by a tunnel fifty feet long.

**Aladdin's Lamp.**—150x1500 feet; situated on the west slope of Collier Mountain, one-fourth mile from Montezuma, Snake River district; located in August, 1882, and in process of patent; owner Oliver Milner, Montezuma; vein a fissure, four feet wide, pay streak eight inches, containing galena, gray copper, and black sulphurets, in quartz, milling, when sorted, forty per cent lead and from 75 to 125 ounces silver per ton; developed by three shafts, forty, fifteen, and fifteen feet deep, and one forty-foot tunnel.

**Alleghany and Prospect.**—Lewis and Wooding, Decatur, owners; claims 1500x150 feet each; situated in the Horseshoe, Peru district, three miles from Decatur; located in 1879 and 1882; veins both fissures, averaging six feet in width, pay streak eighteen inches, containing galena and quartz, assaying from 50 to 200 ounces silver per ton; developed by three shafts, sixteen, twenty-five, and thirty-eight feet in depth.

**Alpha and Delta.**—C. L. Westerman, John Westerman, H. E. Lindsey, and others, all Breckenridge, owners; claims 1500x150 feet; situated on Mt. Quandary, Pollock district, eight miles from Breckenridge; located in 1879; veins both contacts, about eight feet in thickness, containing galena and iron pyrites and quartz, assaying fifty per cent lead and twenty ounces silver per ton; developed by a shaft twenty-six feet deep, three other shafts from ten to sixteen feet in depth, one open cut 100 feet long and nine feet wide; output 100 tons of ore.

**Alpine Rose.**—150x1500 feet; situated in Illinois Gulch, one and one-half miles from Breckenridge; located in February, 1879, and patented in August, 1882; owners Peter Engle, L. B. Smart, and A. D. Bullis, all Breckenridge; vein a fissure, three feet wide, pay streak twelve inches, containing galena and quartz, assaying from twenty-five to seventy-five ounces silver per ton; developed by one shaft fifty feet deep and ninety feet of tunneling.

**Alta and Monarch.**—Owned by C. L. Westerman, John Westerman, and H. E. Lindsey, all Breckenridge; claims 1500x150 feet each; situated on Mt. Lindsey, McBarnes district, eight miles from Breckenridge; located in 1882; veins both contacts, forty feet thick, containing silver and copper in dolometic porphyry, milling, when sorted, $33 per ton; developed by a shaft fourteen feet deep and an open cut forty feet long; output forty tons.

**Altoona.**—Owned by Wm. Mendenhall, Decatur; claim 1500x150 feet; situated on the north slope of Glacier Mountain, Snake River district, two miles from Montezuma, and located in August, 1881; vein a fissure five feet wide, pay streak from three to twenty inches, containing galena and gray copper in quartz, milling, when sorted, 76 to 300 ounces silver per ton; developed by ten shafts from eight to twenty feet in depth, opening up the vein for a distance of 800 feet; output twenty tons.

**American.**—150x1500 feet; situated on the top of Humbug Hill, one mile from Lincoln, Avalanche district, and located in 1879; owners Timothy Murphy, Patrick McCarty, Henry J. Litten, and Thos. Smith, all Lincoln, and L. B. Smart, Breckenridge; vein a vertical contact, with porphyry and slate walls, thirty inches wide, containing gold and silver bearing quartz, milling, when sorted, $45 per ton; developments—one thirty-foot tunnel and two shafts twenty and sixteen feet deep.

**American Eagle.**—(See Eliza Jane.)

**American Eagle and Condor.**—Owned by Isaac Williams, Swan City; claims 1500x150 feet each; situated on the north slope of Williams' Hill, Swan district, one mile south-east of Swan City, and located in 1879;



vein a contact fifty feet wide, containing gold quartz and some sulphurets, milling, when sorted, $100 in gold and seven ounces silver per ton—developments—two shafts eighteen and seventy feet in depth.

**American Girl, Isabel, and Quincy.**—Three claims, 150x1500 feet each; situated on the east slope of the Ten-mile Range, seven miles from Breckenridge; owners G. T. Meyers and Henry Lopas, both Breckenridge; veins all fissures, from five to fifteen feet wide; in the American Girl two pay streaks six and twelve inches wide, containing gold and silver bearing quartz; developments—four open cuts, fifteen, twenty, forty, and twenty feet long.

**American Mining and Smelting Company.**—(See Lake County); owns the Aftermath, Climax, and Index, covering twenty-five acres; situated on Elk Mountain, near Ten-mile district, and patented in 1880 and 1881; vein a contact, varying in thickness, and containing lead and iron carbonates and galena, carrying silver and some gold, in a dolomite gangue, and yielding well; developments extensive, and exposing large ore-reserves; improvements—complete and improved steam machinery, buildings, etc.; output from August, 1881, to September, 1882, 7,500 tons of heavy lead ore.

**Amy Johnson.**—Owned by A. Dolan, Wheeler, Henry Wendling and Elbert and H. B. Boyse, all Leadville; claim covers four acres; situated on the north-east slope of Sheep Mountain, Ten-mile district, one-eighth of a mile from Robinson; located in 1880, and in process of patent; vein a contact four feet wide, containing galena and carbonates in dolomite, assaying from eight to twenty ounces silver per ton; developed by three shafts, ten, eighteen, and twenty feet in depth.

**Antarctic.**—Owned by M. M. and W. H. Howe, both Quandary, and J. W. Riley, Chicago; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, three-fourths mile from Quandary; located in July, 1882; vein a fissure four feet wide, pay streak thirty inches, containing silver sulphides in a quartz gangue, milling, when sorted, 200 ounces silver per ton; developed by four ten-foot shafts and one thirty-two-foot shaft; improvements—shaft-house, etc.; output six tons.

**Antarctic and Polar.**—Owned by Frank Boach, Quandary, Wm. H. Dillon, Alma, and A. D. Williamson, Denver; claims 1500x150 feet each; situated on Mount Quandary, Pollock district, one and three-quarters miles from Quandary; located in June, 1882; veins both fissures two feet in width, containing quartz and gray copper, assaying $20 per ton; developed by an open cut and tunnel twenty feet in length and an open cut fifteen feet long, with some improvements.

**Appleton Queen, St. James, and Lake King.**—Three claims, 150x1500 feet each; situated on the south slope of St. James Mountain, one mile from Rexford, North Swan district; located in July, 1881; owners George L. Loop, Appleton, Wis., and Henry Jarchow, Swan City; veins all fissures from two to five feet wide, pay streaks from ten to twenty-eight inches, containing quartz and gray copper, assaying from 75 to 100 ounces silver per ton in the first, and quartz, iron pyrites, and sulphurets, assaying thirty-six ounces silver per ton, in the second, and galena and quartz, assaying fifty per cent lead and twenty-two ounces silver per ton, in the third; developments—three shafts from twenty to thirty-five feet in depth and one tunnel twenty-five feet long, in connection with which there is a five-acre mill site, located in September, 1882.

**Arcadie.**—150x1500 feet; situated on the north slope of Collier Mountain, one mile from Montezuma, Peru district, and located in August,

1880; owner James Blanton, Chihuahua; vein a fissure four feet wide, pay streak six inches, containing galena and quartz, assaying fifteen per cent lead and from ten to sixty ounces silver per ton; developed by three shafts from ten to fifteen feet in depth.

**Arctic and Wide West.**—Two claims, 150x1500 fee each; situated on the north slope of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in April and July, 1881; owners Isaac Filger and A. E. Frost, both Chihuahua, and Joseph Trudeau, Georgetown; veins both fissures five feet wide each, pay streaks from six to ten inches, containing quartz, sulphurets, and gray copper, assaying in the former about the same as the Buckeye, of which it is an extension, and on the latter $45 per ton in gold and silver; developments—one drift 100 feet long on the Arctic, and one shaft twelve feet deep on the Wide West.

**Arctic Group.**—Comprising the Arctic, Arctic Extension, and Western Star lodes, 1500x150 feet each; owned by J. P. Samuel, M. B. & B. B. Boyer, C. H. Riley, and Samuel Cohen, all Fairplay; claims situated on the north slope of North Star Mountain, Pollock district, one mile from Quandary City; located from 1879 to 1881, and in process of patent; veins all fissures from four to five feet wide, pay streaks from ten to twenty-four inches, containing gold and silver quartz, silvernite, and galena, milling, when sorted, from $50 to $200 per ton; developed by a cross-cut 100 feet in length and two shafts twelve and fifteen feet in depth and one open cut and tunnel thirty feet long.

**Argenta.**—150x1500 feet; situated on the south slope of Fletcher Mountain, three miles from Kokomo, Ten-mile district; located in 1880; owners L. B. Staley and A. B. Luning, both Kokomo; vein a fissure three feet wide, pay streak eight inches, containing quartz, with sulphurets, native silver, and silver glance, assaying from one-half to five ounces gold and from 20 to 200 ounces silver per ton; developed by a twenty-foot shaft, a twenty-foot tunnel, and a twenty-foot open cut.

**Argentine Placer.**—(See Elk Mountain Mining and Smelting Company.)

**Arnold.**—Owned by W. C. Maupin and Benjamin Kessler, both Decatur; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one-fourth mile from Decatur; located August 23, 1881; vein a fissure eighteen inches wide, pay streak five inches, containing bismuth quartz carrying gold and silver, assaying $50 in gold and seven ounces silver per ton; developed by an adit on the vein twenty feet long.

**Arnold & Co. Concentration-Works.**—J. Arnold and Justus Junk, both Leadville, owners; works situated at Recen; containing Jigs; capacity thirty tons per day (twenty-four hours).

**Astor, Boston, and Newport Boy.**—Three claims, 150x1500 feet each; situated on the west slope of Independence Mountain, three miles from Warren's Station, Beaver Dam district, and located in August, 1881; owner A. W. Folts, Warren's Station (Heywood P. O.); veins all fissures from four to five feet wide, pay streaks from twenty to thirty inches, containing galena, yellow copper, and quartz, assaying from 75 to 100 ounces silver per ton; developed by one ten-foot shaft on each claim and a tunnel seventy-five feet long, designed to cut all the above veins.

**Atlantic.**—J. C. Staats, Daniel Raff, and J. Parpillion, all Kokomo, owners; claim 1500x150 feet; situated on the west slope of Fletcher Mountain, and at head of Mayflower Gulch, Ten-mile district, four miles from Kokomo,



and located in 1882; vein a contact from three to four and one-half feet wide, pay streak four inches, containing galena and quartz, milling, when sorted, six per cent lead, two and four-tenths ounces gold, and twenty-nine ounces silver per ton; developed by a shaft sixteen feet deep.

**Atlantic.**—Owned by Isaac Ware and others, Montezuma; claim 1500x150 feet; situated on the west slope of Collier Mountain, Snake River district, one and one-half miles from Montezuma, and located in 1873; vein a fissure six feet wide, pay streak from four to eighteen inches, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and from 50 to 100 ounces silver per ton; developed by a drift on the vein 100 feet long and a twenty-five-foot winze; output fifty tons.

**Atlantic and Pacific Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado, in May, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Jas. H. Fletcher; vice-president, J. F. Tabor; secretary, John J. McGowan; treasurer, David May—all Leadville; offices Rooms 4 and 5 Boston Block, Leadville, Colo.; owns twelve claims, covering 120 acres; situated on Bartlett Mountain, Ten-mile district, three miles from Kokomo; veins all contacts, varying in thickness, and containing argentiferous galena, carrying some copper in a dolometic gangue; developed by twelve shafts of varying depths and one tunnel 160 feet long.

**Atlantic and Yankee Boy.**—Two claims, 150x1500 feet each; the first situated on the south-west slope of Lenawee Mountain, and the last on the north-west slope of Independence Mountain, four miles from Montezuma, Beaver Dam district; located in 1881; owner S. D. Stearnes, Argentine; veins both fissures, four and three feet wide, respectively, the Atlantic containing quartz with galena scattered through it, and the Yankee Boy a pay streak from ten to eighteen inches of copper pyrites and quartz; developments—two shafts, one on each claim, twelve feet deep each.

**Autocrat and Autocrat South.**—Owned by A. G. Hoopes, Breckenridge, and Hal. Sayr and Samuel Mischler, both Central City; claims 1500x150 feet each; situated on Nigger Hill, Minnesota district, one mile from Breckenridge; patented in 1881-82; vein a contact three feet thick, containing argentiferous galena in a porphyry gangue, milling, when sorted, thirty-eight ounces silver per ton; developed by two shafts sixty-five and ninety feet in depth, with some other workings.

**Atlantic-Pacific Tunnel Company.**—(See Clear Creek County.)

**Baden-Baden.**—Situated on the crest of Gold Run Hill, one-half mile from Preston, Union district; located in March, 1880; owners D. J. Thompson, Michael Reese, and J. J. Nelson, all Preston, and R. A. Sankey, Breckenridge; vein a fissure sixteen feet wide, pay streak fourteen inches, containing free-milling gold quartz, assaying from $10 to $40 per ton in gold and some silver; developed by one shaft forty feet deep.

**Badger.**—150x1500 feet; situated on Elk Mountain, one-half mile from Kokomo, Ten-mile district, and in process of patent; owners Geo. R. Fisher, J. C. Langhorn, F. X. O'Brien, F. O'Mara, J. V. Holcomb, Herman Moeker, and J. D. Manville, all Leadville, and Thos. Coleman, Kokomo; vein a horizontal contact, varying in thickness, and containing carbonates and decomposed matter, milling, when sorted, an average of $16 per ton; developed by one 350-foot incline and 200 feet of levels, with some other workings.

**Badger.**—Owned by Wm. N. West, J. L. Dameron, and John Loveless, all Caledonia, Minn., and Wm. Foy, Chihuahua; claim 1500x150 feet; situated on the south slope of Lenawee Mountain, Peru district; located in September, 1880; vein a fissure seven feet wide, pay streak from six to ten inches, containing quartz, galena, and yellow copper, assaying from 50 to 300 ounces silver per ton; developed by a shaft forty feet deep and cross-cut tunnel 130 feet long, with some other workings.

**Baker.**—150x1500 feet; situated on the north slope of Nigger Hill, one and one-half miles from Breckenridge, Bevan district; located in 1878; owners Jno. H. Willoughby, Thos. C. and Jno. H. Abbett, and E. L. Baker, all Breckenridge; vein a contact three feet thick, pay streak nine inches, containing lead carbonates and decomposed matter, assaying thirty-five ounces silver per ton; developed by a shaft seventy feet deep, with a fifteen-foot drift from bottom of shaft, and an open cut fifteen feet long.

**Bald Eagle.**—150x1500 feet; situated on the east slope of Bald Mountain, seven miles south-east of Breckenridge, Bald Mountain district; located in August, 1879; owners Robert Schmeling, Breckenridge, and J. Fairchild and others, Denver; vein a fissure four feet wide, pay streak sixteen inches, containing galena, chlorides, and quartz, assaying fifty ounces silver per ton; developed by one tunnel 100 feet long.

**Ballarat Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, F. W. Pitkin, Pueblo; vice-president, H. A. W. Tabor, Denver; secretary, J. N. Chipley; treasurer, Dr. Jno. Law—both Leadville; manager, Perry H. Brandon, Robinson; office 200 Harrison Avenue, Leadville; owns four claims, 150x1500 feet each, viz.: Ballarat, Tip-top, Belle of the Hills, and Mountain Daisy; situated on Sheep Mountain, one mile from Robinson, Ten-mile district; located in 1878, and patented in 1882; vein a contact, varying in thickness, and containing quartz, sulphurets, carbonates, and galena, assaying from 10 to 200 ounces silver per ton; developments—five shafts from 20 to 100 feet in depth, two drifts thirty and fifteen feet long, and one incline tunnel 250 feet long, with other workings and some improvements.

**Baltimore.**—J. K. Mercer and Frank Ramsey, both Robinson, owners; claim 1500x150 feet; situated on the south-east slope of Sheep Mountain, Ten-mile district, three-fourths mile from Robinson, and located in 1879; vein a contact four and one-half feet thick, pay streak from six to twenty-two inches, containing galena, carbonates, and decomposed matter, assaying twenty-eight ounces silver per ton; developed by two shafts thirty and forty-two feet in depth and a twenty-foot incline.

**Banks Group.**—Consisting of Banks, Lee, Virginia, Silver Queen, Little Lizzie, and Mullen, 150x1500 feet each; situated on the west slope of Red Mountain, five miles from Breckenridge, Argentine district, and located in May, 1882; owners L. J. Squires, G. W. Banks, and C. Mullen, all Breckenridge; vein a contact three feet thick, containing porphyry and gray copper, assaying sixteen per cent copper and fifty-five ounces silver per ton; developed by four tunnels from fifteen to thirty feet in length and one twelve-foot shaft.

**Bard.**—Owned by J. D. Feidt, Chihuahua, and Louis La Fontan, Monroe, Mich.; claim 1500x150 feet; situated on the west slope of Collier Mountain, Peru district, three-fourths mile from Chihuahua, and located in August, 1880; vein a fissure six feet wide, pay streak six inches, containing gold-bearing quartz, assaying from three to fifteen ounces gold and sixteen ounces silver per ton; developed by an open cut, exposing the vein for 100 feet, and a shaft thirty-two feet deep.



**Batavia.**—Owned by B. F. Follett, S. L. Morris, and Charles Anderson, all Kokomo, and O. O. Bowman and Peter Wilkes, both Trenton, N. J.; claim 1500x150 feet; situated on Jacque Mountain, Ten-mile district, one and one-half miles from Kokomo, and located in 1879; vein a contact four and one-half feet thick, containing lead carbonates and decomposed matter, assaying fifty ounces silver per ton; developed by a twenty-five-foot shaft, three tunnels, 40, 60, and 100 feet in length, and other workings.

**Battle Mountain Silver Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, D. J. Chapman; vice-president, Geo. Pelton; secretary, Chas. M. G. Felten—all Philadelphia, Pa.; superintendent, S. C. Whipple, Breckenridge; office Room 23, 218½ Walnut street, Philadelphia, and Breckenridge; owns the Burlington, Neshaming, Fairmount, Graham, Eastwood, Belford, Grief, and Evening Star, 1500x150 feet each; situated on Nigger Hill, Bevan district, at Breckenridge; veins all fissures from two to six feet in width, containing quartz and galena, assaying from twenty to sixty ounces silver per ton; Neshaming developed by a tunnel 100 feet in length, and others by small shafts.

**Beecher Group.**—Four claims, 150x1500 feet each, viz., Beecher, Tilton, Little Leo, and Maid of Athens; situated on the west slope of Prospect Hill, one and one-fourth miles from Breckenridge, McKay district; located in 1880–82; owners D. W. Fall, E. F., N. W., and B. M. Wiard, all Breckenridge, G. M. Wiard, Denver, and C. F. Wiard, Waukegan, Ill.; vein a contact, from ten to twenty feet thick, with lime walls, in the Beecher containing honeycombed quartz, assaying from 10 to 100 ounces silver per ton; developed by one sixty-foot shaft and 120 feet of tunneling; in the Tilton, containing iron-stained quartz, assaying $6 per ton in gold and silver; developed by one twelve-foot shaft and one ten-foot open cut; the Little Leo vein a fissure four feet wide, pay streak eighteen inches, containing galena and quartz, assaying $12 per ton; developed by one twenty-foot tunnel; the Maid of Athens developed by assessment work.

**Belcher Group.**—R. A. Sankey, Breckenridge, owner; group comprises the Belcher, Mexican, Cadiz, California, Alameda, Scout, Kentucky, and Wykoff, 1500x150 feet each; situated on Nigger Hill, Minnesota district, three miles from Breckenridge; located in 1879; veins all contacts, from six to forty inches wide, seamed with galena and copper, milling, when sorted, from $25 to $125 in gold and silver per ton; developed by a tunnel 195 feet in length and seven shafts from fifteen to forty-five feet in depth; output 200 tons.

**Belger.**—(See Little Alva and Belger.)

**Belle Combs.**—150x1500 feet; situated on the north slope of Flathead Mountain, at Swan City, Swan district; located in June, 1882; owners D. H. Daywalt and H. B. Ready, both Swan City; vein a vertical fissure, pay streak three inches, containing iron pyrites, quartz with a heavy copper stain, and some galena; developed by one ten-foot shaft.

**Belle Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, L. R. Vredenburg; secretary and treasurer, George H. Brown; manager, L. W. Aldrich—all Montezuma; vice-president, F. L. Loomis, Somerville, N. J.; office Montezuma; owns Belle East and Belle West, two claims, 150x1500 feet each; located in 1880, and patented in 1881; situated on the east slope of Glacier Mountain, one and one-quarter miles from Montezuma, Snake River district; vein a fissure varying in width, pay streak from five to fifteen inches, containing galena and gray copper in a quartz

gangue, milling, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developed by three levels, 110, 210, and 480 feet long, and ten shafts from ten to sixty feet deep each, and considerable improvements; output 1,000 tons, worth $30 per ton net.

**Belle of Cayuga No. 1, No. 2, and No. 3.**—Three claims, 150x1500 feet each; situated on the south-east slope of Iowa Hill, one-half mile from Breckenridge; located in August, 1882; owners B. A. Whiteman and J. J. Lapping, both Breckenridge; vein a contact, with slate and porphyry walls eight feet thick, pay streak from six to twelve inches, containing lead carbonates in a decomposed gangue, milling, when sorted, fifty per cent lead, $10 in gold, and thirty-five ounces silver per ton; developed by three shafts, fifty-six, fifteen, and twenty feet deep.

**Belle of the West Group.**—Wm. Miller, H. A. Sisson, John P. Ramsey, and estate of John Sisson, all Wheeler, and B. F. Stewart, Shelbyville, Mo., owners; group comprises the Belle of the West, Missouri Boy, and Eagle Bird lodes, 1500x150 feet each; situated on the west slope of Keifer Mountain, Ten-mile district, two miles from Wheeler; located in 1878; veins all fissures from five to seven feet in width, pay streaks from eight to sixteen inches, containing galena and gold quartz, assaying thirty per cent lead, from thirty to sixty ounces silver, and one and one-half ounce gold per ton; developed by a twenty-foot incline, a tunnel fifteen feet long, and a drift sixty feet long.

**Bellwether.**—3 315-1000 acres; situated on south the slope and top of Red Peak, ten miles from Frisco, Wilkinson district, and located in July, 1881; owners H. M. McDill, R. E. Sloan, and J. V. Brown, all Frisco; vein a fissure three feet wide, pay streak eleven inches, containing gray copper and galena in quartz, milling, when sorted, from 100 to 300 ounces silver per ton; developed by one eighty-foot tunnel and one twelve-foot shaft.

**Bellevue and Fairview.**—Owned by Daniel Hanley, Michael Brennan, and James Cassidy, all Breckenridge; claims 1500x150 feet each; situated on Brooks Hill, Minnesota district, two miles from Breckenridge; veins both fissures from four to eight feet in width, pay streaks two feet, containing argentiferous galena and quartz, assaying from ten to fifty per cent lead and from fifty to eighty ounces silver per ton; developed by three shafts from fifteen to forty feet in depth.

**Beloit.**—150x1500 feet; situated on the west slope of Mineral Hill, two miles from Breckenridge, Bevan district, and located in May, 1880; owner Matthias Hofwimer, Breckenridge; vein a fissure four feet wide, pay streak fourteen inches, containing galena and quartz, assaying fifty per cent lead and twenty-ounces silver per ton; developed by one sixty-six-foot shaft, from which runs one six-foot drift.

**Ben Butler.**—Thomas Brady, Robinson, owner; claim 1500x150 feet; situated on the south slope of Sheep Mountain, Ten-mile district, and located in May, 1880; vein a contact, with a mineral streak from two to three inches in width, containing galena and quartz; developed by a shaft ninety feet deep and a thirty-five-foot tunnel.

**Berne.**—Owned by J. B. Conrad, Peter Eagle, and John H. Willoughby, all Breckenridge; claim 1500x150 feet; situated on Shock Hill, Spaulding district, three-fourths mile from Breckenridge, and located in 1879; vein a contact nine feet thick, seamed with gold and silver bearing quartz, milling, when sorted, $100 per ton; developed by a shaft seventy feet deep.



**Bertha and Bono Venturo.**—Two claims, 150x1500 feet each; situated on the north side of the Swan River, eight miles from Breckenridge, Swan district; located in August, 1882; owners James Fryer & Sons, Baltimore, Md.; vein a fissure ten feet wide pay streak five inches, containing gray copper and quartz, assaying $30 per ton; developments—on the former one forty-foot shaft and 279 feet of tunneling and cross-cutting, and on the latter one twenty-foot shaft and one cross-cuts 130 feet long.

**Bess.**—150x1500 feet; situated on the top of Humbug Hill, one-half mile from Lincoln City, Avalanche district; located in April, 1882; owners Wm. H. Jones and Joseph Martin, both Lincoln; vein a contact, with porphyry and lime walls fifteen feet thick, containing gold-bearing quartz; developments—one twenty-five-foot shaft and several openings on the vein.

**Bessie.**—150x1500 feet; situated on the north side of Spruce Creek, six miles from Breckenridge, Pollock district; located in October, 1881; owner Wm. Egan, Breckenridge; vein a fissure twenty-seven inches wide, containing galena and quartz, assaying forty per cent lead and ten ounces silver per ton; developed by one tunnel thirty-five feet long.

**Beverly Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1881; manager, A. E. Frost, Chihuahua; owns six claims, 150x1500 feet each, viz., Rosina, Bradley, Daisy, North Star, Americus, and Baby; situated at the head of Elephant Gulch, two miles from Decatur, Peru district; located in 1880, and in process of patent; veins all fissures from five to ten feet wide, pay streak from four to ten inches, containing gray copper, sulphurets, galena, and quartz, assaying from 50 to 200 ounces silver per ton; developed by twelve shafts from ten to twenty feet in depth and one cross-cut eighty feet long, designed to cut the veins in all these claims at great depth.

**Big Chief.**—150x1500 feet; situated on the north slope of Nigger Hill, one and one-fourth miles from Breckenridge, Bevan district; located in 1878; owners Geo. H. Bressler, Jno. H. Willoughby, Thos. C. and Jno. H. Abbett, and E. L. Baker, all Breckenridge; vein a contact from three to eight feet thick, containing lead and iron carbonates and decomposed matter, assaying twenty-two ounces silver per ton; developed by one shaft forty-five feet deep, with a tunnel forty-five feet long running from the shaft.

**Big Horn.**—Owned by John Evans and Geo. W. Kesler, both Decatur; claim 1500x150 feet; situated on the west slope of Silver Mountain, Peru district, one-half mile from Decatur; located in 1881; vein a fissure five feet wide, containing quartz and galena, assaying twenty per cent lead and thirty ounces silver per ton; developed by a tunnel twenty feet long and a shaft eighteen feet deep.

**Big Pittsburgh.**—Owned by A. L. and Daniel Shock, both Breckenridge; claim 1500x150 feet; situated on Gibson Hill, Union district, two and one-half miles from Breckenridge; located in 1879; vein a contact varying in thickness, pay streak eighteen inches, containing galena and carbonates, assaying from 20 to 100 ounces silver per ton; developed by an adit on the vein 188 feet long and six shafts from ten to forty feet in depth.

**Big Spring.**—150x1500 feet; situated on the west slope of Imperial Mountain, thirteen miles from Breckenridge, North Swan district; located in April, 1881; owners Wm. Galbraith, Rexford, R. E. Sloan, Frisco, and E. J. Gill, Breckenridge; vein a fissure twenty-five feet wide, containing quartz, carrying iron sulphurets, assaying from five to fifteen ounces silver per ton; developed by a tunnel 260 feet, one drift thirty-five feet long, and one open cut twenty-five feet long.

**Bill Tweed.**—(See Windsor and Bill Tweed.)

**Bismarck.**—150x1500 feet; situated on the Swan River, two miles north-east of Swan City, Swan district; located in July, 1881; owners Philip Funk, Jno. D. Sterner, Michael A. Bousch, Lambert Gleasen, and Jos. Miller, all Swan City; vein a contact, seven feet wide, of honey-combed quartz, carrying galena and sulphurets, assaying 160 ounces silver and a trace of gold per ton; developed by one shaft thirty-eight feet deep and one tunnel 150 feet long.

**Bismarck.**—150x1500 feet; situated on the south slope of Mineral Hill, one-half mile from Lincoln, Bevan district; located in May, 1878; owners Timothy Murphy, Patrick McCarty, and Henry J. Litten, all Lincoln; vein a fissure fifteen inches wide, pay streak nine inches, containing galena in a quartz gangue, milling, when sorted, fifty-five per cent lead and twenty-six ounces silver per ton; developed by two shafts twenty and fifty-seven feet deep and one tunnel 137 feet long; output fifty tons.

**Bismuth.**—Owned by W. C. Maupin and Benjamin Kessler, both Decatur; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one-fourth mile from Decatur; located August 27, 1881; vein a fissure four feet wide, pay streak from six to fifteen inches, containing bismuth quartz, carrying gold and silver, assaying $100 per ton; developed by an adit thirty-five feet long.

**Black Diamond Silver Mining Company (The).**—Incorporated under the laws of Colorado; in February, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president and manager, Warren Woods, Morrison, Ill.; vice-president and treasurer, Jno. W. Marden, Leadville; secretary, Henry E. Woods, Warren, Ohio; owns Black Diamond, Bradford Belle, Lulu, Pappoose, San Francisco, Cryptogram, and Lucy Discovery, seven claims, covering about thirty acres, and the Diamond Tunnel site; situated on Sheep Mountain, adjoining Robinson, Ten-Mile district; located in 1878-9, and the first three patented in 1881; veins (three in number) all fissures from ten to forty inches in width, containing dolomite, galena, and carbonates, assaying from 10 to 100 ounces silver per ton; developed by twelve shafts from fifteen to seventy feet in depth, one thirty-five-foot incline, and one tunnel eighty feet long.

**Black Fox.**—150x1500 feet; situated on the west slope of Glacier Mountain, two and one-half miles from Montezuma, Snake River district, and located in June, 1882; owners Chas. Gerard, Geo. Frey, and Jno. Montgomery, all Montezuma; vein a fissure varying in width, and containing quartz with sulphurets; developed by one twenty-six-foot tunnel.

**Black Prince.**—C. L. and John Westerman and H. E. Lindsey, all Rreckenridge; claim 1500x150 feet; situated on Spruce Creek, five miles from Breckenridge, and located in 1879; vein a fissure varying in width, pay streak eighteen inches, containing galena and copper pyrites in a quartz gangue, milling, when sorted, from forty to sixty ounces silver per ton; developed by a tunnel 197 feet long and a shaft sixty-three feet deep.

**Black Spider and Antoinette.**—Two claims, 150x1500 feet each; situated on the south-west side of Silver Lake, five miles from Breckenridge; located in June, 1881, and in process of patent; owners Frank D. Bacon, Breckenridge, and J. Sherman Hall, Chicago; vein a fissure twelve inches wide, pay streak from three to six inches, containing quartz and sulphurets, milling, when sorted, from 100 to 150 ounces silver per ton; developed by one twenty-foot shaft.



**Blanche and Aileen.**—F. C. Freeman, Breckenridge, owner; claims 1500x150 feet each; situated on Williams Hill, Gold Run district, three miles from Breckenridge, and located in 1882; vein a contact four feet wide, pay streak twenty-six inches, containing gold and silver quartz and galena, assaying forty per cent lead and from ten to twenty-five ounces silver per ton, and a trace of gold; developed by two shafts twenty-two and twenty-eight feet in depth.

**Blanche Silver Mining Company (The).**—Incorporated under the laws of Illinois; capital stock $125,000, in 12,500 shares of $10 each; non-assessable; president, Alex. F. Hume, Hamilton, Ohio; owns the Blanche lode, 150x1500 feet; situated on the north slope of Collier Mountain, two and one-half miles from Montezuma, Snake River district; located in April, 1874, and patented; vein a fissure forty inches wide, pay streak fourteen inches, containing galena, gray copper, and zinc blende, in a quartz gangue, milling, when sorted, thirty-five per cent lead and thirty-five ounces silver per ton; developments two drifts 260 and 40 feet long, respectively, and one eighty-five-foot shaft.

**Bledsoe.**—150x1500 feet; situated on the south-east slope of Jacque Mountain, one-eighth mile from Kokomo, Ten-mile district; located in 1876, and in process of patent; owners Chas. Bledsoe, S. L. Morris, and B. F. Follett, all Kokomo; vein a contact eight feet thick, containing iron and quartz, assaying eighteen ounces silver per ton; developed by a tunnel and incline ninety feet long.

**Blue.**—150x1500 feet; situated on the south slope of Tucker Mountain, two miles from Kokomo, Ten-mile district, and located in 1878; owners C. E. Noble and J. E. Wheeler, both Colorado Springs, Chas. W. Ellis, G. W. Lindgreen, and others, Kokomo; vein a contact two feet wide, containing decomposed matter and carbonates; developed by one forty-foot shaft and one twelve-foot level.

**Blue-beard.**—Owned by G. W. Davidson, R. M. Fanning, and Thos. Kane, all Breckenridge; claim 1500x150 feet; situated on McCullough Mountain, Pollock district eight miles from Breckenridge, and located in 1882; vein a contact four feet wide, seamed with galena, assaying fifteen ounces silver per ton; developed by a sixteen-foot open cut.

**Bluebird.**—Owned by H. Stevenson and J. C. Christie, both Alma; claim 1500x150 feet; situated on the Blue River slope of North Star Mountain, Pollock district; located in May, 1882; vein a fissure eight inches wide, pay streak four inches, containing gold and silver quartz, assaying $100 per ton; developed by a tunnel twelve feet long.

**Blue Danube.**—150x1500 feet; situated on the east slope of Shock Hill, three-fourths mile from Breckenridge; located in 1879; owners Geo. H. Bressler and W. H. Ileff, both Breckenridge; vein a contact from two to six feet thick, containing a black iron ore, assaying from one to two ounces gold and from ten to twenty ounces silver per ton; developed by one tunnel 230 feet long, and other workings.

**Blue-grass and Boston.**—John C. Marshall and R. C. Fisher, both Leadville, and Daniel D. Kelly, Kokomo, owners; claims 1500x150 feet each; situated on the north-east slope of Sheep Mountain, Ten-mile district, one mile from Kokomo; located in 1879; vein a contact three feet thick, containing carbonates and galena in a decomposed gangue, milling, when sorted, twenty-five ounces silver per ton; developed by a tunnel 300 feet long and a shaft seventy-two feet deep.

**Blue Island.**—150x1500 feet; situated on the west slope of Prospect Hill, one and one-fourth miles from Breckenridge; located in December, 1879; owners James Delaharty, Denver, and August Jaucher, Breckenridge; vein a contact, varying in thickness, and containing black quartz, assaying from one to twenty ounces silver per ton; developed by one shaft 105 feet deep.

**Blue River.**—R. P. Spencer, Edward Kronner, E. G. Stiles, and John Sensenderfer, all Breckenridge, and A. G. Langford, Denver, owners; claim 1500x150 feet; situated on Gibson Hill, one and a half miles from Breckenridge, and located in 1880; vein a contact four feet wide, seamed with iron pyrites and galena, assaying a trace of gold and fourteen ounces silver per ton; developed by two inclines fifty and seventy-five feet in length.

**Blue River Mining Company (The.)**—Incorporated under the laws of Missouri, in 1876; capital stock $200,000, in 400 shares of $500 each; president and manager, R. A. Sankey, Breckenridge; treasurer, Geo. D. Hall; secretary, Jno. C. Orrick—both St. Louis; offices Breckenridge and 315 Olive street, St. Louis; owns the Blue River placer, ninety-one acres; situated in the mouth of French Gulch, at Breckenridge, and located in 1860 and 1861, and patented April, 1881; developed by the Union French ditch, two miles long, in which the owners have a half interest, a one-seventh interest in the Gold Run ditch, twelve miles long, 240 feet of fluming, 300 feet of sluicing, and a booming dam; improvements—houses, blacksmith-shop, etc. There is a lode claim on this surface ground, viz., Blue River No. 1, 150x1500 feet; located in December, 1880, and patented in April, 1881; vein a vertical contact, thirty inches wide, through which is scattered galena and gold-bearing quartz, the former assaying thirty-five per cent lead and twenty-five ounces silver, and the latter from one-half to three ounces gold per ton; developments—one fifty-five-foot shaft.

**Blue Swan.**—Owned by Allen P. Richardson, Breckenridge; claim 1500x150 feet; situated at junction of Blue and Swan Rivers, Bevan district, five miles from Breckenridge, and located in 1880; vein a fissure eight feet wide, two pay streaks twenty inches in width each, containing gold and silver bearing quartz; developed by a tunnel thirty-five feet long.

**Bluff Group.**—Comprising the Bluff, American, and Kohinoor lodes, 1500x150 feet each; W. R. Bartlett, Frank C. Marsh, and B. M. Newcomb, all Breckenridge, owners; group situated on Shock Hill, one-half mile west of Breckenridge, and located in 1879; vein a contact fifteen feet thick, containing quartz carrying gold and silver, and assaying from $20 to $200 per ton; developed by three shafts, thirty, forty, and seventy-five feet in depth, and two tunnels twenty-five feet long each.

**Bobtail and Cincinnatus.**—Owned by T. E. Clery, Montezuma; claims 1500x150 feet each; situated on the north-east slope of Glacier Mountain, Snake River district, one-fourth mile from Montezuma, and located in 1880; veins both fissures four feet in width each, pay streaks from two to ten inches, containing galena and quartz, assaying fifty per cent lead and from 40 to 100 ounces silver per ton; developed by twelve open cuts on the vein from five to twenty feet in depth.

**Bon-Ton.**—150x1500 feet; situated on the north slope of Nigger Hill, one mile south of Lincoln, Bevan district; located in June, 1880; owners George and John Baker, C. H. McCormick, William King, and Martin Berg, all Lincoln, and Wm. Abbett, Breckenridge; vein a fissure four feet wide, pay streak fourteen inches, containing galena and porphyry, assaying thirty per cent lead and forty-five ounces silver per ton; developed by one shaft sixty feet deep, an eleven-foot incline from bottom of shaft, and other workings.



**Bonanza.**—150x1500 feet; situated on the north slope of Clifford Mountain and on Rock Creek, fourteen miles from Dillon, Wilkinson district; located in July, 1882; owners Wm. Clifford, H. E. Hoffman, and G. F. Roth, all Frisco, and W. M. Chandler and Pat. Hickey, both Dillon; vein a fissure three feet wide, pay streak six inches, containing quartz and gray copper, with native and brittle silver, assaying from 100 to 500 ounces silver per ton; developments—one ten-foot open cut and one eighteen-foot tunnel from end of cut.

**Bonanza.**—150x1500 feet; situated on the east slope of Bear Mountain, one and one-half miles from Montezuma, Snake River district; located in August, 1881; owners C. McCoy, Montezuma, and W. W. Burke and Robert Wood, both Georgetown; vein a fissure fourteen inches, containing galena and quartz, assaying $10 gold and fifty ounces silver per ton; developed by one incline nineteen feet long.

**Bonanza Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in September, 1881; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, James Streeter; vice-president, T. J. Sweeney; secretary, H. N. Webb; treasurer, C. F. Lee—all Leadville; office 616 Harrison Avenue, Leadville; owns an interest in the Delmonico lode; (see Delmonico).

**Bonanza Gold Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1882; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, Wm. Sears; vice-president, J. C. Klein; secretary and treasurer, L. D. Coe—all Leadville; general manager, Daniel Vaughn, Kokomo; owns the Lucky Boy and Little Chief lodes, 1500x150 feet each; situated on the south-east slope of Jacque Mountain, Ten-mile district, at Kokomo; located in 1882; veins both contacts, three feet thick each, containing dolomite, galena, and sulphurets, assaying forty per cent lead and from forty to sixty ounces silver per ton; developed by an incline 150 feet long.

**Bonanza Group.**—Five claims, 300x1500 feet each, viz.: Bonanza, Little Daisy, Little Joe, Home-stake, and Indiana; situated on the north slope of Coss Hill, one mile south of Argentine; located in 1879–80; owners T. E. Eastland, Argentine, D. L. and B. R. Moore, J. C. Thompson, and O. S. Poston, all Harrodsburg, Mercer County, Ky.; veins all fissures from six to ten feet wide, pay streaks from three to six inches, containing sulphurets and quartz, assaying 150 ounces silver and from five to ten ounces gold in the Bonanza, sixty-five ounces silver in the Home-stake, and 125 ounces silver and $20 gold per ton in the Daisy; developments—one tunnel 130 feet long and a shaft twenty feet deep on the Bonanza, one tunnel 100 feet long on the Daisy, one twenty-foot tunnel on the Indiana, and two twelve-foot shafts on the Home-stake.

**Bonanza King.**—Owned by C. B. Eggleston and T. R. Newman, both Montezuma; claim 1500x150 feet; situated on the west slope of Glacier Mountain, Snake River district, one-half mile from Montezuma; located in 1881; vein a fissure three feet wide, pay streak six inches, containing quartz, galena, and sulphurets, assaying thirty-five per cent lead and 175 ounces silver per ton; developed by a tunnel thirty feet long.

**Bonanza King and Last Chance.**—Owned by D. Solomon, E. J. Collingwood, John Dewers, and D. B. McDaniel, all Breckenridge; claims 1500x150 feet each; located in June, 1882; vein a fissure four feet wide, pay streak from four to eight inches, containing quartz, gray copper, and sulphurets, assaying 100 ounces silver per ton; developed by a tunnel ninety feet long and three shafts from ten to twenty feet in depth.

**Bonanza and Me Too.**—Owned by Samuel S. Lesher, J. N. and Philip Weston, and Charles Robertson, all Breckenridge; claims 1500x150 feet; situated on the south-west slope of Mt. Guyot, Avalanche district, seven and one-half miles from Breckenridge; located August 14, 1882; vein a contact varying in thickness, pay streak eighteen inches, containing silver chlorides and porphyry, assaying $36 in silver and gold per ton; developed by two shafts twenty feet deep each.

**Bond Extension.**—N. F. Grover, Geo. E. Kedzie, and others, Chihuahua, and Warren Corle and Wm. Brett, Boulder, owners; claim 1500x150 feet; situated on the south-east slope of Collier Mountain, Peru district, three-fourths mile from Chihuahua; located in 1882; vein a fissure varying in width, pay streak three inches, containing bismuth quartz, assaying from 50 to 450 ounces silver and from one to three ounces gold per ton; developed by a thirty-five-foot tunnel.

**Bonny Bird.**—150x1500 feet; situated on the south slope of Brooks Hill, two miles from Argentine; located in 1879; owners Jere. N. Hill, Denver, H. Biddle, Breckenridge, and C. McMahon, W. P. Norris, and A. C. Dewees, all Argentine; vein a fissure four feet wide, containing pockets of black sulphurets, antimonial silver, and copper carbonates, assaying $50 gold and 100 ounces silver per ton; developed by one fifteen-foot shaft and one sixty-foot drift from the Sunny South workings (see Sunny South).

**Boom.**—Owned by Samuel Flint, Golden; claim 1500x150 feet; situated on the north slope of Smith Hill, Joe Davis district, six miles north-east of Breckenridge; located June 24, 1882; vein a contact three feet thick, pay streak six inches, containing porphyry and galena, assaying sixty-three ounces silver per ton; developed by a shaft twenty-one feet deep.

**Bosco Boneta.**—150x1500 feet; situated on the south slope of Jacque Mountain, one-half mile from Kokomo, Ten-mile district; located in July, 1881; owners Philip Foot, Kokomo, and Jno. McConaghy, Matthew Darley, and J. H. Glezen, all Robinson; vein a contact, containing streaks of carbonate ore, assaying ten ounces silver per ton; developed by one thirty-foot incline and one thirty-six-foot shaft.

**Boss Group.**—Owned by A. L. Van Alstein, Geo. L. Gould, and Fred. Bauer, all Frisco; group comprises the Boss, Denver, White Cloud, and Applejack lodes, 1500x150 feet each; situated on the east slope of Kelleher Mountain and on Rock Creek, Wilkinson district, eighteen miles from Frisco; located in 1881; veins all fissures, from two to five feet in width, pay streaks from six to eighteen inches, containing gray and black copper, antimonial silver, bromides, and sulphurets, in a quartz gangue, milling, when sorted, from 50 to 250 ounces silver per ton; developed by an open cut 125 feet long and from five to fifteen feet deep, and some other workings.

**Boss Tunnel Mining Company (The).**—Incorporated under the laws of Colorado, July 2, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Walter M. Bickford; vice-president, H. S. Ellis; secretary, H. M. Woodford; treasurer, Jacob Bergerman; general manager, Geo. McCloskey—all Robinson; office Robinson; owns the Boss Tunnel site, 3000x6 feet; situated on the east slope of Sheep Mountain, Ten-mile district, three-eighths mile from Robinson; on which a tunnel is driven 510 feet, opening up the Boss; vein four feet wide, mineral streak eight inches, containing iron carbonates and galena, assaying thirty-seven ounces silver per ton; on which a location has been made covering 150x1500 feet of surface ground.

**Boston.**—(See Fischer Gold and Silver Mining Company.)



**Boston.**—(See Astor, Boston, and Newport Boy.)

**Boston Mining Company (The).**—Incorporated under the laws of Colorado, in 1878; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, John B. Brewer; vice-president, Francis Bartlett; secretary and treasurer, Wm. L. Candler—all Boston, Mass.; offices 40 Water street, Boston, and Montezuma; owns the Sst. John Tunnel site, 3000x6 feet, across which are located ten claims, 1500x150 feet each, numbered from one to ten; situated on Glacier Mountain, at Sts.John, Snake River district; located in 1873; Nos. 5 and 7 patented in 1876, and others in process; veins all fissures from five to eighty feet in width, pay streaks from one to four feet, containing galena with native and brittle silver in a quartz gangue, milling, when sorted, fifty per cent lead and from 50 to 150 ounces silver per ton; developments—three tunnels driven on the tunnel site, first 1,700, second 150, and third 80 feet in length, the longest cutting the veins in the before-mentioned claims at varying depths, and shafts, levels, winzes, upraises, etc., the under-ground workings aggregating about two miles, showing ore-reserves large enough to ship 100 tons per day for many years; improvements—ore-houses, boarding-houses, lodging-houses, chutes, etc.; and a smelting-works, situated at St. John, containing Blake Crusher, Cornish Rolls, Water-jacket Furnace, etc.; motive power supplied by a 120-horse-power engine and ample boiler; capacity twenty tons per day (twenty-four hours).

And owns the Prima lode, 1400x50 feet; situated on Glacier Mountain, Snake River district, one mile from Sst.John; located in 1866, and in process of patent; vein a fissure from six to seven feet wide, pay streak from twelve to fourteen inches, containing galena with native and ruby silver in a quartz gangue, milling, when sorted, sixty ounces silver per ton; developed by a shaft eighty feet deep and a drift eighty feet long.

**Boston and Breckenridge Smelting Company.**—(See Keystone Bullion Company.)

**Boston Tunnel Company.**—Consisting of W. I. Taylor and S. E. Roberts, both Denver, and Jno. Evans, Decatur, the last of whom is manager; owns four claims, 150x1500 feet each, viz.: Alice May, I. X. L., Boston, and Ruby; situated on the south slope of Cooper Mountain, at Decatur, Peru district, and located in 1880; veins all fissures from three to five feet wide, pay streaks from ten to twenty inches, containing galena in a quartz gangue; and one tunnel site, 6x3000 feet; situated the same as the lode claims; located August, 1882; developments—two tunnels fifty and twenty feet long and two shafts twelve feet deep each.

**Boulder Boy.**—150x1500 feet; situated on the east slope of Argentine Mountain, two and one-half miles from Decatur, Peru district, and located in July, 1880; owners Wm. Steele, Decatur, Mark Hodgson, Alma, and Geo. Guest, Divide P. O.; vein a fissure five feet wide, pay streak from five to fifteen inches, containing galena, gray and yellow copper, and quartz, assaying from ten to seventy-five ounces silver per ton; developed by a discovery shaft up to which runs a sixty-foot level, and one twenty-foot open cut, from end of which is a twelve-foot tunnel.

**Boys.**—(See Peerless and Boys.)

**Breckenridge.**—(See Hammer and Breckenridge.)

**Breckenridge Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president and manager, R. B. Stapp; vice-president, George H. Bressler; secretary, E.

J. Collingwood—all Breckenridge; office Breckenridge; owns five full claims, 150x1500 feet each, viz.: Belle of the Rhine, Detroit, and three others; situated on the east slope of Carbonate Hill, one mile from Breckenridge; developments—one shaft 105 feet deep on the Belle of the Rhine and assessment work on the others, showing contact veins varying in width, and containing a fair material.

**Breckenridge View Group.**—Comprising the Breckenridge View, Vanderbilt, and Dolly lodes, 1500x150 feet each; T. S. Davis and A. F. Winegardner, both Breckenridge, owners; claims situated on Nigger Hill, Bevan district, one mile from Breckenridge; located in 1880; vein a fissure six feet wide, pay streak ten inches, containing galena and porphyry, assaying thirty ounces silver per ton; developed by three tunnels, 70, 73, and 113 feet in length.

**Brittle Silver.**—150x1500 feet; situated on the north slope of North Star Mountain, eleven miles from Breckenridge, Pollock district; located in August, 1880; owners Charles A. Finding, Samuel Jones, and D. W. Lash, all Breckenridge; vein a fissure two feet wide, pay streak eighteen inches, containing yellow copper and quartz, assaying $40 per ton; developed by two tunnels thirty-six and twenty-five feet long.

**Brittle Silver Group.**—Comprising the Brittle Silver, Boston, Little Nell, and White Sparrow lodes; owned by George Rust & Co., Denver; manager, C. H. Dunbrack, Decatur; claims 1500x150 feet each; situated on the north-east slope of Silver Mountain, Peru district, one-half mile from Decatur; located in June, 1870, and patented in 1883; veins all fissures from two to four feet in width, pay streaks from three to fifteen inches, containing galena, gray copper, and brittle silver, in a quartz gangue, milling, when sorted, an average of 100 ounces silver and some gold per ton; developed by shafts from twenty to sixty feet in depth, several open cuts, and a cross-cut tunnel, designed to cut all the veins at great depth, being driven by steam-drills; improvements—reduction-works, etc.; (see George Rust & Co.'s Reduction-works.)

**Broadway.**—Owned by T. R. Newman, Fannie Sawtell, and T. E. Clery, all Montezuma; claim 1500x150 feet; situated on the north-east slope of Bear Mountain, Snake River district, one mile from Montezuma; located in May, 1880; vein a fissure five feet wide, pay streak from six to twelve inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and forty ounces silver per ton; developed by three tunnels, 120, 260, and 280 feet in length, and other workings; output 100 tons.

**Broadway Group.**—Comprising the Broadway, Old Mexico, and Charles Sumner lodes; Luther H. Conn, Wm. G. McRee, and John W. Donaldson, all St. Louis, and Allen P. Richardson, Breckenridge, owners; claims 1500 x150 feet each: situated on Bald Mountain, Bald Mountain district; located in 1880; veins all fissures about four feet wide, pay streaks from twelve to fourteen inches, containing galena and gold and silver quartz, assaying forty per cent lead, from forty to eighty ounces silver, and $5 in gold per ton; developed by two tunnels twenty and forty feet in length and a shaft twenty-three feet deep.

**Brooks-Snider Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of New Jersey, May 17, 1881; capital stock $2,000,000, in 400,000 shares of $5 each, non-assessable; president, James L. Hastings; vice-president, Ephraim Young; secretary, Samuel P. Griffiths; treasurer, Wm. Reeves—all Philadelphia; superintendent, Jacob B. Conrad, Breckenridge; offices (principal), Camden N. J., (transfer), 302 Walnut street, Philadelphia, and (branch), Breckenridge



owns three claims, 150x1500 feet each, viz., Illinois, Fannie Barrett, and Peerless; situated on the west slope of Shock Hill, one mile from Breckenridge; located in August, 1880; ore body appears to be a deposit, thirty-five feet thick, lying on the surface, consisting mainly of quartzite and some sulphides, milling, when sorted, from $10 to $100 in gold and from 50 to 250 ounces silver per ton; developed by 300 feet of surface-workings and drifts aggregating 300 feet; output 1,200 tons.

And owns a Twenty-stamp mill on this property, the machinery of which is intended for the treatment of both gold and silver ores, the stamps having copper plates and California amalgamating-pans and settlers; capacity thirty tons per day.

**Brothers Tunnel Mining Company (The).**—Incorporated under the laws of New York; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, John A. Mapes; secretary, H. N. Otis—both New York; superintendent, S. D. Andrews, Denver, Colo.; office Georgetown, Colo., and 200 Broadway, New York; owns nineteen claims, 1500x150 feet each; situated on Decatur Mountain, Peru district, one-fourth mile from Decatur; located in 1880 and 1881; veins all fissures from four to ten feet in width, pay streaks from six to fifteen inches, containing galena and quartz, assaying from 70 to 1,000 ounces silver per ton; developed by a tunnel 360 feet long, and twelve open cuts aggregating 150 feet.

**Buckeye.**—150x1500 feet; situated on the south slope of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in September, 1880; owners Isaac Filger, Chihuahua, M. H. Vader and Antoine Libby, both Georgetown; vein a fissure five feet wide, pay streak from four to eight inches, containing quartz, sulphurets, and gray copper, assaying from 500 to 1,000 ounces silver per ton; developed by one adit on the vein fifty feet long.

**Buckeye and Alabama.**—Frederick Barton, Solomon Barrett, Thomas Hartwell, and others, Montezuma, Charles McClure, Denver, owners; claims 1500x150 feet each; situated on the west slope of Glacier Mountain, Snake River district, one mile from Montezuma; located in 1881 and 1882; veins both fissures six feet in width, pay streaks from six inches to eighteen inches, containing quartz and galena, assaying fifty per cent lead and twenty-seven ounces silver per ton; developed by a tunnel 105 feet long and five openings on the vein ten feet long each.

**Buckeye and Cleveland City Tunnel.**—E. B. Tucker, Montezuma, and Walter Burson, Leadville, owners; claim 1500x150 and site 3000x6 feet; situated on the west slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma, and located in August and September, 1881; vein a fissure from three to four feet wide, without any well defined pay streak, containing several seams of galena, assaying, at surface, five ounces silver, and at depth of thirty-one feet, eighty-one ounces silver per ton; developments—a tunnel forty feet long on the tunnel site, designed to cut the Buckeye vein at great depth, on which there are two shafts thirty-one and ten feet in depth.

**Bufa Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Thos. T. Eyre; vice-president, M. A. Lathrop; secretary and treasurer, W. H. Townsend—all Decatur; owns five claims, 150x1500 feet each, viz., Bufa, Talpa, Bufita, Santa Rita, and Oakland; situated on the south slope of Gray's Peak, two and one-half miles from Decatur, Peru district, and located in September, 1880; veins all fissures from three to fifteen feet wide, pay streaks from three to six inches

containing bismuth quartz, with sulphurets and iron pyrites, milling, when sorted, from one to twenty ounces gold and from 25 to 400 ounces silver per ton; developments—on Bufa one tunnel 165 feet long and one twenty-foot shaft, on Talpa one thirty-foot open cut and one twenty-eight-foot shaft, and on the others an adit each, from fifteen to twenty-five feet long; and four mill sites, five acres each, situated at the junction of the middle and south forks of the Snake River.

**Buffalo.**—D. L. Clancy, Chihuahua, and S. D. Andrews, Denver, owners; claim 1500x150 feet; situated on the south-west slope of Cooper Mountain, Peru district, three-fourths mile from Chihuahua, and located in 1879; vein a fissure seven feet wide, pay streak five inches, containing galena, sulphurets, and quartz, assaying forty per cent lead and 120 ounces silver per ton; developed by a shaft forty-three feet deep, drifts on the vein forty-five feet long, and five openings from five to ten feet deep each.

**Buffalo Boy.**—(Extension of Glendale); G. A. Domedian, Montezuma, and H. J. Domedian and Jos. Brunner, both Decatur, owners; claim 1500x150 feet; situated on the west slope of Bismuth Mountain, Peru district, two miles from Montezuma, and located in 1881; vein a fissure four and one-half feet wide, pay streak six inches, containing bismuth quartz, assaying sixty-two ounces silver per ton; developed by a drift eighteen feet long.

**Buffalo Mountain Silver Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, C. C. Royce, Washington, D. C.; vice-president, A. C. Graff; secretary and treasurer, H. E. Hoffman; manager, Geo. F. Roth; offices Frisco and 607 I street, Washington, D. C.; owns seven claims, 150x1500 feet each, viz.: Fairmount, situated on the south slope of Red Peak, and Winona, Chicago, Wild Cat, Hancock, Garfield, and Washington; situated on the north slope of Buffalo Mountain, four and a half miles from Frisco, Ten-mile district, and located in August, 1880; veins all fissures from five to forty feet wide, pay streaks from ten to thirty inches, containing galena in a quartz gangue, milling, when sorted, fifty-one per cent lead, two-tenths ounce gold, and fifteen ounces silver per ton; developments—four tunnels, 130, 110, 42, and 26 feet long, and other workings.

**Buffalo Tunnel.**—J. L. Taylor, Henry E. Lopas, and W. H. Watson, all Breckenridge, owners; site 3000x6 feet; situated on Peak No. 8 of the Ten-mile Range, three miles from Breckenridge, and located in 1882; on which a tunnel is driven ninety feet long, cutting a fissure vein four feet wide, containing galena and quartz, assaying fifty ounces silver per ton, on which one location is made, the Buffalo, 1500x150 feet.

**Bullion Prince Mining Company.**—Incorporated under the laws of Colorado, in March, 1883; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president, J. C. Richardson, St. Louis; vice-president, M. L. Cox; secretary, J. S. Way; treasurer, W. H. Lawrence—all Denver; office 271 Seventeenth street, Denver; owns Brooklyn, Tropic, Northern Light, Nil Desperandum, and Argentine, 150x1500 feet each; situated on Collier Mountain where the same joins Teller Mountain, four miles from Montezuma, Snake River district, and located in 1882; veins all fissures, the Brooklyn containing ten inches of almost solid galena, milling, when sorted, $44 per ton; developed by one sixty-foot shaft and a cross-cut designed to cut all these veins; the Tropic fourteen inches of quartz, gray copper, and galena, assaying $40 per ton, and on the others the Company is doing development work; and the Lakete (see Park County).



**Bummer.**—150x1500 feet; situated at Dyerville; located in 1881; owner Geo. H. Bressler, Breckenridge; vein a fissure eighteen inches wide, pay streak from one to two inches, containing gray and yellow copper and quartz assaying from twenty-five to seventy-five ounces silver per ton; developed by one forty-foot shaft.

**Bunker Hill.**—150x1500 feet; situated on the north slope of Nigger Hill, two miles from Breckenridge, Minnesota district; located in 1873; owners R. A. Sankey, Breckenridge, and Patrick McCarty, Lincoln City; vein a fissure thirty inches wide, pay streak from ten to eighteen inches, containing galena and lead carbonates in a decomposed gangue, milling, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developments—two shafts 100 and 75 feet deep and 140 feet of drifting; output 100 tons, and present shipments ten tons per week.

**Butterfly, Childe Harold, and Swan River.**—Three claims, 300x1500 feet each; situated on the north slope of Gleason Hill, one-half mile from Swan City, Swan district, and located in 1879; owner H. B. Turner, Swan City (F. S. Reardon, Frisco, and A. A. Allen, Wichita, Kas., are interested in the two last); veins all horizontal contacts from four to six feet thick, containing quartz and galena, assaying $25 per ton in silver and gold; developed by one seventy-five-foot tunnel and one thirty-foot shaft and one thirty-foot open cut on the Butterfly, one ninety-eight-foot shaft on the Childe Harold, and one ten-foot shaft on the Swan City.

**C. A. Peavy.**—Owned by C. A. Peavy and W. M. Coates, both Denver; office 612 Curtis street, Denver; vein a fissure five feet wide, pay streak nine inches, containing bismuth and quartz, assaying $30 in gold and from 25 to 150 ounces silver per ton; developed by a cross-cut tunnel thirty feet long and a shaft thirty-two feet deep; claim 150x1500 feet; situated on the east slope of Silver Mountain, one mile from Decatur, Peru district, and located in June, 1881.

**C. L. Young.**—(See Fox River Mining Company.)

**C. W. Moore.**—Owned by C. W. Moore and Frank Lyon, both Montezuma; claim 1500x150 feet; situated on the east slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district, and located in July, 1880; vein a fissure from four to fourteen feet wide, pay streak four inches, containing galena and silver glance in a quartz gangue; developed by a tunnel 200 feet in length.

**Cable Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, David T. Burr; vice-president, James Thatcher; secretary, Jos. F. Lamorelle; treasurer, Wm. F. Burr—all Philadelphia, Pa.; general manager, Chas. Buckland, Montezuma; office 32 South Fourth street, Philadelphia, and Montezuma; owns the Cable lode, 150x1500 feet; situated on the east slope of Glacier Mountain, one-half mile from Montezuma, Snake River district; located in October, 1881, and patented in August, 1882; vein a fissure five feet wide, pay streak from five to eight inches, containing galena and gray and metallic copper in a quartz gangue, the galena assaying forty-five per cent lead and forty ounces silver per ton, the metallic copper sixteen per cent copper and from 100 to 300 ounces silver, and the entire ore body milling, when sorted, forty per cent lead and twenty-four ounces silver per ton; developed by two tunnels 208 and 43 feet in length, and some other workings.

**Caledonia Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in August, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president and superintendent, Jno. McGregor; vice-president, Jno. M. Breeze; secretary, Lemuel L. Breeze—all Breckenridge; treasurer Sam'l. M. Allen, Denver; office Breckenridge; owns eighteen claims, 150x1500 feet each, viz.: Ordelia, Caledonia, Johanna, Josie Steele, Big Tree, Beaconsfield, Gladstone, Wolverine, Vernon Springs, Emma, Henrietta, McGregor, Johnnie, and Highland; situated on the east slope of the Ten-mile Range and in Eagle Gulch, from two to four miles west of Breckenridge; located in 1880; veins all fissures, from two to five feet wide, pay streaks from four to fourteen inches, containing gold and silver bearing quartz, assaying from $10 to $40 per ton; developments—on the Ordelia and Beaconsfield one tunnel 100 feet long on each, and on the other claims from ten to thirty feet of work; and four other claims, situated between the forks of Indiana Gulch, near Boreas, McBarnes district; located in 1881.

**California**—(Extension of Bonanza); 150x1500 feet; situated on the north slope of Clifford Mountain, fourteen miles from Dillon, Wilkinson district; located in July, 1882; owner W. M. Chandler, Dillon; developments—one fourteen-foot tunnel, showing a vein, gangue, and ore similar to the Bonanza.

**California.**—150x1500 feet; situated on the lower bench of Gibson Hill, one and three-fourths miles from Breckenridge, McKay district; located in March, 1880; owners F. R. Themer and J. F. Collins, both Breckenridge; vein a nearly horizontal contact, from fourteen to twenty inches thick, containing iron carbonates, carrying both gold and silver; developed by two tunnels sixty and sixty-five feet long.

**Cambrian.**—Owned by R. J. Jones, Georgetown, Wm. Edwards, Idaho Springs, and Charles Hardling, Keokuk, Ia.; claim 1500x150 feet; situated on the east slope of Ruby Mountain, Peru district, one-fourth mile from Decatur; located in August, 1880; vein a fissure from six to seven feet wide, pay streak eight inches, containing gold and silver quartz, assaying $25 in gold and 100 ounces silver per ton; developed by tunnel forty feet long.

**Canada.**—Owned by F. F. Mullen and Nelson and Paul Murray, all Alma; claim 1500x150 feet; situated on the north slope of Mt. McCullough, Pollock district, eight miles from Breckenridge; located September 26, 1882; vein a fissure four feet wide, pay streak ten inches, containing galena, yellow copper, and quartz, assaying $60 per ton; developed by a twelve-foot tunnel.

**Candler Group.**—(See Fannie V. Candler Group.)

**Canon.**—150x1500 feet; situated on the south slope of Red Peak, eight miles from Frisco, Wilkinson district; located in July, 1882; owner Jno. P. Scarff, Frisco; vein a fissure eighteen inches wide, pay streak four inches, containing gray copper, galena, and quartz, assaying forty ounces silver per ton; developed by one ten-foot open cut.

**Capital.**—Owned by Charles Hardling, Keokuk, Ia.; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one-quarter of a mile from Decatur; located in 1882; vein a fissure three feet wide, containing quartz with galena and yellow copper; developed by two tunnels twenty-five and forty feet in length.

**Cary Contact.**—150x1500 feet; situated on the west slope of Gibson Hill, three-fourths mile from Breckenridge; located in December, 1878; owner Geo. Doty, Breckenridge; vein a fissure from one to four feet wide, pay streak four inches, containing galena and quartz, assaying thirty per cent lead and from forty to fifty ounces silver per ton; developed by two tunnels 70 and 106 feet long and one shaft ten feet deep.



**Cashier and Champion Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, Horace A. Hurlbut, New York; secretary, W. H. Spencer; superintendent, Geo. K. Sabin—both Columbus; offices Columbus and No. 2 Wall street, New York; owns the Cashier and Champion lodes, 1500x150 feet each, and patented; Champion short tunnels, Nos. 1 and 2, 1,500 feet in length each, and Champion tunnel site and Champion short tunnel site, 3,000 feet in length each; situated on Teller Mountain, Snake River district, four miles from Montezuma; veins all fissures from one to six feet in width, containing quartz and galena, milling, when sorted, from thirty to sixty ounces silver per ton; developments are quite extensive and expose large ore-reserves; improvements—ore-houses, shaft-houses, tram-ways, chutes, etc.; this property is a regular producer, having shipped 320 tons in 1881, and 250 in the first eight months of 1882. (See New York and Colorado Mining Syndicate and Company, Chaffee County.)

**Cassa.**—Owned by W. P. Pollock and Daniel A. Recen, both Recen; claim 1500x150 feet; situated on the west slope of Jacque Mountain, Ten-mile district, one mile from Recen; located in 1879, and patented July 22, 1882; vein a fissure eight and one-half feet wide, containing quartz and galena, milling, when sorted, fifteen ounces silver per ton; developed by a shaft fifty-two feet deep.

**Cayuga.**—Owned by C. W. Moore and Frank Lyon, both Montezuma; claim 1500x150 feet; situated on the east slope of Glacier Mountain, Snake River district, two miles from Montezuma; located in August, 1880; vein a fissure four feet wide, containing quartz and galena; developed by a twenty-two-foot tunnel.

**Celestial.**—150x1500 feet; situated on the east side of the Gore Range, at the head of South Willow Creek, Wilkinson district; located in June, 1881; owners Louis A. Wildhack and Reinhold Huy, both Frisco, and Fred. Bachman, Kiowa; vein a fissure two feet wide, pay streak from two to five inches, containing gray copper, copper glance, and quartz; developed by two open cuts twelve feet long and one cross-cut twelve feet long, showing fairly.

**Centre.**—Owned by Isaac Ware and others, Montezuma; claim 1500 x150 feet; situated on the west slope of Collier Mountain, Snake River district, one and one-half miles from Montezuma; located in 1873; vein a fissure five feet wide, pay streak eight inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and thirty-five ounces silver per ton; developed by a drift on the vein fifty feet long.

**Cetawissa and Intermediate.**—Two claims, 150x1500 feet each; situated on the north slope of Nigger Hill, one and one-quarter miles from Breckenridge; located in 1879; owners John H. and Thomas C. Abbott and E. L. Baker, all Breckenridge; vein a horizontal contact two feet thick, containing decomposed matter and iron carbonates, assaying twelve ounces silver per ton; developments—two shafts twenty and fifty feet deep, one fifteen-foot cut, and one fifteen-foot tunnel.

**Challenger.**—Owned by George S. Marsh, Georgetown; claim 1500x 150 feet; situated on Bismuth Hill, Peru district; located in 1867, and patented; vein a fissure from ten to twenty feet wide, containing quartz and galena, assaying 106 ounces silver per ton; developed by adit thirty feet long.

**Champion Tunnel Lodes, Nos. 1 to 5.**—150x1500 feet each; situated on the east slope of Sheep Mountain, at Robinson, Ten-mile district; located in April, 1879; owners John A. Hall, Jr., Robinson, J. C. Meagher, A. A. Smith, and Chester Bullock, all Leadville, General Charles Adams, Denver, and Charles H. Cramer, Bradford, Pa.; vein a contact ten feet wide, pay streak from nine to eighteen inches, containing galena, with wire and native silver, and some black sulphurets, in a quartz gangue, milling, when sorted, $200 per ton; developed by one tunnel 900 feet long, 50 feet of winzes, and other workings.

**Champion, Two-Forty, Erie, and Rover.**—Four claims, 150x1500 feet each; situated on the south slope of Mineral Hill, one and one-half miles from Lincoln, and located in June, 1879; owners Timothy Murphy, Patrick McCarty, and Henry J. Litten, all Lincoln; veins all fissures from six to fifty inches, containing galena in a quartz gangue, milling, when sorted, thirty-two per cent lead and sixteen ounces silver per ton; developed by four shafts from 20 to 100 feet deep, and other workings

**Champlain, York State, Adirondack, and Crown Point.**—Four claims, 150x1500 feet each; situated on the north-east slope of Gold Hill, three and one-half miles from Kokomo, Ten-mile district; located in 1879, and patented in 1881; owners George T. Murdock and R. I. Chahoon, both Crown Point, New York, and J. A. McCune, Kokomo; vein a contact twenty inches thick, containing carbonates, milling, when sorted, thirty-two per cent lead and twenty ounces silver per ton; developed by one tunnel 583 feet long, starting in the Champlain and running through the other claims, one twenty-foot incline, two shafts thirty-three and ten feet deep, and other workings.

**Chariot.**—Owned by J. P. Whitney, New York, and George B. Colby, Kokomo; claim 1500x150 feet; situated on the south slope of Fletcher Mountain, Ten-mile district, three and one-half miles from Kokomo; located in 1879, and in process of patent; vein a contact eleven feet thick, containing galena scattered through the vein-matter, assaying twenty-five ounces silver per ton; developed by a twenty-five-foot shaft and a thirty-five-foot tunnel.

**Charley Boy.**—150x1500 feet; situated on the south-west slope of Sheep Mountain, one mile from Robinson, Ten-mile district; located in January, 1881; owners Oliver Swanson, Robinson, A. B. Johnson, Rico, John Anderson and ——Skidmore, Leadville; vein a contact varying in thickness, containing dolomite and galena; developed by three shafts, forty-five, thirty, and ten feet deep.

**Charlotta Queen.**—Owned by John A. Campbell, Argentine; claim 1500 x 150 feet; situated on Dianthe Mountain, Congers district, three-fourths mile from Argentine, and located in 1882; vein a fissure three feet wide, pay streak two inches, containing silver quartz, assaying 150 ounces silver per ton; developed by an adit on the vein thirty feet long.

**Checkmate.**—Situated on Jacque Mountain, one-fourth mile from Kokomo, Ten-mile district, and located in April, 1882; owners Warren Woods, Morrison, Ill., Jno. Evans, W. M. Bickford, H. M. Woodford, and A. W. Etter, all Robinson; vein a contact five feet thick, pay streak from twenty to thirty inches, containing carbonates, galena, and dolomite; developments—one ten-foot shaft and one ninety-foot incline.

**Chenoa.**—150x1500 feet; situated on the east slope of the Ten-mile Range, two miles from Breckenridge, and located in August, 1880; owners A. B. Seybolt and W. D. Churchell, both Breckenridge; vein a fissure forty inches wide, pay streak from ten to fifteen inches of gold-bearing quartz, assaying $30 per ton; developed by one shaft 130 feet deep and drift from shaft twenty-five feet long.



**Cherokee Group.**—Comprising the Cherokee, Britain, and Tender foot lodes, 1500x150 feet each; owned by L. N. B. Hoffmire, Breckenridge; group situated on Nigger Hill, Bevan district, two and one-half miles from Breckenridge, and located in 1880; veins all fissures from three to fifteen feet in width, containing gold and silver quartz, assaying one-half ounce gold and twenty ounces silver per ton; developed by three shafts, forty, forty-five, and sixty feet in depth.

**Chicago.**—Owned by H. Hill and W. H. Abbett, both Breckenridge, and Relief Jackson, Lafayette, Ind.; claim 1500x150 feet; situated on the west slope of Nigger Hill, in Breckenridge; located in November, 1879, and in process of patent; vein a contact ten feet thick, containing galena, porphyry, and sand carbonates, assaying from 25 to 150 ounces silver per ton; developed by a tunnel 140 feet long and a twenty-foot cross-cut.

**Chicago and New York.**—Two claims, 300x1500 feet; situated on the west slope of Collier Mountain, one and one-half miles from Montezuma; located March, 1883; owners T. R. Newman and L. H. Bouder, both Montezuma; vein a fissure fourteen inches wide, pay streak six inches, containing galena and quartz, the contents of the former assaying fifty-five per cent lead and thirty-two ounces silver, and those of the latter fifty per cent lead and fifty ounces silver per ton; developed by four shafts fifteen feet deep each and one open cut thirty feet long with a ten-foot face.

**Chief of the West.**—Owned by Richard Fair and Wm. Harrison, both Georgetown; claim 1500x150 feet; situated on Silver Mountain, Peru district, one-fourth mile from Decatur, and located in 1879; vein a fissure seven feet wide, seamed with copper and bismuth, assaying from thirty to sixty ounces silver per ton; developed by an adit forty feet long.

**Chris.**—150x1500 feet; situated on the south slope of Copper Mountain, three miles from Kokomo, Ten-mile district, and located in May, 1881; owners Chris. Eschler and Chris. Berger, both Kokomo; vein a contact varying in thickness, and containing quartz and galena, assaying fairly; developed by a shaft fifty-eight feet deep and a tunnel eighty feet long.

**Christmas Strike.**—Owned by Thomas Maloney and W. H. Fleming, both Breckenridge; claim 1500x150 feet; situated on Bald Mountain, Bald Mountain district, seven miles from Breckenridge; located in 1882; vein a fissure two feet wide, containing quartz with copper pyrites and galena, assaying ten per cent copper and ninety ounces silver per ton; developed by a shaft twenty feet deep.

**City Group.**—Eight claims, 150x1500 feet each, viz.: City of Adelaide, City of Melbourne, City of Sidney, City of Brisbane, City of Wellington, City of Dunedin, and City of Auckland; situated on the top of Mineral Hill, contiguous to the Lucky mine, three and one-half miles from Breckenridge; located in January, 1882; owned by a New York syndicate, represented by E. Beach, Breckenridge; veins all fissures from three to seven feet wide, containing quartz, carrying galena; developments—eight shafts, one on each claim, from twenty to fifty feet in depth; improvements—boarding-house, two store-houses, and blacksmith-shop.

**City of Alton.**—150x1500 feet; situated in Horseshoe Gulch, three and one-half miles from Decatur, Peru district; located in June, 1880; owners

Alex. Johnson and Mrs. Mary Randolph, both Chihuahua; vein a fissure four feet wide, pay streak seven inches, containing galena, gray copper, native silver, and quartz, assaying twenty-five per cent copper, thirty per cent lead, and from 200 to 500 ounces silver per ton; developed by two drifts sixty and ten feet long.

**Clarion Group.**—Seven claims, 150x1500 feet each, viz.: Clarion, Czar, Colorado, Kit Carson, Cordelia, Twins, and Cyclops; situated on the west slope of Collier Mountain, two miles from Montezuma, Snake River district; located in October, 1880; owners H. A. Calwell, Kittanning, Pa., R. P. Crawford, Pittsburgh, Pa., and Wm. Howell, Montezuma; veins all fissures from three to six feet wide, pay streaks from four to ten inches, containing galena, gray copper, and quartz, assaying from 100 to 150 ounces silver per ton; developments—on the Clarion two adits 100 and 30 feet long, and one adit on each of the other claims from ten to thirty feet in length, and other workings.

**Clark Placer.**—Covering about 370 acres; situated in French Gulch, at Lincoln City; located in 1860, and patented in 1879; owners J. J. Riethman, Denver, and Calvin P. Clark, Lincoln City; developments—one main ditch one and one-half miles long, five feet wide at the bottom, and several lesser ditches, aggregating one mile in length; production probably from $2 to $5 per cubic yard, and the property is estimated to have had an output of over $10,000 per annum.

**Clark, Riethman, Ebert & Co.'s Placer.**—160 acres; situated in French Gulch, one-half mile above Lincoln City; located in 1868, and in process of patent; owners Calvin P. Clark, Lincoln City, J. J. Riethman, estate of F. J. Ebert, J. J. Cobb, J. W. McKennie, and others, all Denver; developed by two reservoirs and other improvements.

**Cleveland City Tunnel.**—(See Buckeye and Cleveland City.)

**Clifford.**—Owned by Edward Sheppard, Adam Orzdorf, and James A. McCune, all Kokomo; claim 1500x150 feet; situated on Gold Mountain, Ten-mile district, two and one-half miles from Kokomo, and located in 1879; vein a contact four feet thick, containing dolomite, with galena, assaying nine ounces silver per ton; developed by a shaft 143 feet deep and other workings.

**Clifton, Miner Boy, News Boy, and Margaret.**—Four claims, 300x1500 feet each; situated on the west slope of Independence Mountain, two miles from Montezuma, Snake River district, and located in June, 1881; owners F. M. Hall and Z. F. Lane, both Warren's Station (Heywood, P. O.); veins all fissures four feet wide of quartz, with galena scattered through it; developed by two shafts fifteen and twenty-five feet deep.

**Climax.**—(See American Mining and Smelting Company.)

**Climax.**—John L. Dyer, J. E. Parkenson, and others, owners; claim 1500x150 feet; situated on Warrior's Mark Mountain, McBarnes district, seven miles south of Breckenridge; located in 1882; vein five feet wide, pay streak from one to three feet, containing gray copper and quartz, assaying eight ounces silver per ton; developed by a tunnel 100 feet long and 150 feet of shafting.

**Clinton.**—(See Colorado Consolidated Mining and Tunneling Company.)

**Coley Extension.**—50x450 feet; situated on the crest of Glacier Mountain, one-half mile from Saints John, Snake River district; located in June, 1865, and patented in 1874; owners S. D. McMillan, Cleveland, J. H. McMillan, Chicago, Ed. C. and Fred. A. Guibor, and —— Powell, all Denver, and C. H. Guibor, Beloit, Kas.; vein a fissure four feet wide, pay streak fifteen inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead and from 100 to 150 ounces silver per ton; developments—one fifty-foot shaft, two open cuts twelve and fourteen feet long, and one cross-cut tunnel thirty feet long.



**Colomar Mining Company (The).**—(Unincorporated); superintendent, Frank Wolfe, Frisco; owns five claims, 150x1500 feet each, viz., Silver Vault, Anglo-Saxon, Boss Tweed, Hoo-doo, and Bellwether; situated on the Yellow Creek slope of Red River, Wilkinson district; located in 1880 and 1881, and in process of patent; veins all fissures from one to four feet wide, pay streaks from one to nine inches, containing gray copper, galena, and quartz, assaying from 25 to 100 ounces silver per ton; developed by five tunnels from 10 to 500 feet in length, and other workings.

**Colonel Sellers Group.**—Owned by Edward Lowe and Chas. W. Ellis, both Kokomo, and L. D. Barkalow, Omaha, Neb.; group comprises the Colonel Sellers and eight other claims, covering thirty-five acres; situated on the east slope of Elk Mountain, Ten-mile district, two miles from Kokomo; located in 1879, and patented in 1881 and 1882; veins all contacts about eight feet in thickness, pay streaks from two to four feet, containing galena and carbonates in a dolometic gangue, milling, when sorted, twenty per cent lead, one and one-half ounces gold, and twenty ounces silver per ton; developed by an incline 375 feet in length and 1,200 feet of drifts, exposing large ore-reserves; operated by a ten-horse-power engine; output 600 tons, daily shipments from five to twenty tons.

**Colorado.**—150x1500 feet; situated on the north slope of Coss Hill, one mile south of Argentine; located in November, 1879; owners Watson & Emerick, Breckenridge; vein a contact nine feet wide, containing pockets of sulphurets carrying gold; developed by two shafts twenty-five and thirty feet deep and one drift sixteen feet long.

**Colorado.**—Owned by Jos. Reeder and F. C. L. Bush, both Breckenridge, and John C. Orrick, St. Louis, Mo.; claim 1500x150 feet; situated on the south slope of Mineral Hill, one and one-half miles from Breckenridge; located in 1880; vein a fissure four feet in width, pay streak from six to fourteen inches, containing galena and gold-bearing quartz, assaying from thirty to forty ounces silver and from one to ten ounces gold per ton; developed by a shaft 137 feet deep and other workings; improvements—shaft-house, cabins, etc.

**Colorado and New Mexico Consolidated Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Joseph T. Cornforth; vice-president, A. H. Garfield; secretary, treasurer, and general manager, Ira W. Pendleton; general superintendent of mines, J. W. Pendleton—all Denver; superintendent at Breckenridge, J. H. Potter; offices 372 Holliday street, Denver, and Breckenridge; owns the Rose of Breckenridge lode, 1500x150 feet; situated on the French Gulch slope of Mineral Hill, three miles from Breckenridge, Bevan district; located in 1880, and in process of patent; vein a fissure four feet wide, containing galena in a quartz gangue, milling, when sorted, sixty per cent lead and thirty-five ounces silver per ton; developed by a tunnel 800 feet long and two shafts ninety and ten feet in depth, and other workings; improvements—tunnel-house, boarding-house, etc., and tunnel laid with bricks and equipped with cars; the Indigo, Avalanche, and Bertie B., three claims, 1500x150 feet each; situated on the north slope of Gibson Hill, one mile from Breckenridge;

located in 1880; veins all contacts about two feet thick, containing pockets of galena, assaying an average of seventy per cent lead and sixty ounces silver per ton; developed by three shafts, 100, 65, and 30 feet in length, and other workings; the Pendleton, Nos. 1, 2, 3, and 4, 1500x150 feet each; situated on the east side of Pennsylvania Gulch, eight miles south of Breckenridge; located in 1880; vein a vertical fissure, containing galena carrying silver and copper in a quartz gangue; developed by two tunnels thirty-five and twenty feet in length and two thirty-foot shafts; the Montague, 1500x150 feet; situated on the south slope of Prospect Hill, one mile south of Breckenridge; located in 1880; vein a fissure thirty inches wide, containing gold-bearing quartz; developed by a thirty-foot shaft; the Iron Carbonate, 1500x150 feet; situated on the north slope of Nigger Hill, one mile from Breckenridge; located in 1880; vein a fissure two feet wide, containing porphyry and iron carbonates; developed by a twenty-foot tunnel; and seven other full claims, within a radius of six miles from Breckenridge, on which the Company is doing development work.

**Colorado Consolidated Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado; capital stock $4,000,000, in 400,000 shares of $10 each, non-assessable; president, Theodore Curran, Topeka, Kas.; vice-president, J. N. Templer; secretary, William Raymond; treasurer, S. C. Brown; general manager, Smith P. Brown—all Leadville; offices Rooms 17, 18, and 19, Howell Block, Leadville; owns the Clinton, Blue Eyes, Bison, Francis, and eight other claims, 1500x150 feet each; situated on Fletcher Mountain, Ten-mile district, four miles from Robinson; located in 1879, and in process of patent; veins all contacts from two to six feet thick, containing dolomite, with galena and gray copper, assaying $400 per ton; developed by a tunnel 185 feet long and a number of shafts and open cuts; and owns the Washington Tunnel site, 3000x6 feet, and a five-acre mill site adjoining the lode claims.

**Colorado Land and Mineral Company.**—Incorporated under the laws of New York, in April, 1882; capital of $3,000,000, in 600,000 shares of $5 each, non-assessable; president and managing director, Charles H. Collins; general manager, Timothy Kyle—both Leadville; secretary, and treasurer, Oliver T. Hungerford, New Hartford, Conn.; offices Wall street, New York, and 124 Harrison Avenue, Leadville; owns the Maximus, Bernadotte, Orestes, and Maximus Extension, four claims, 1500x150 feet each; situated in Clinton or Blue River Gulch, Pollock district, five miles from Kokomo; located in 1881, and in process of patent; veins all fissures varying in width, and containing galena and quartz carrying gold and silver, milling, when sorted, eight-tenths ounce gold and 130 ounces silver per ton; Maximus developed by a tunnel 100 feet long, a shaft twenty-eight feet deep, fifty feet of drifts, and an open cut 100 feet long, and other workings; Bernadotte by an open cut eighty feet in length, and others by assessment work; and owns the El Dorado Group, eight claims, and the Zip Coon Group, twenty-four claims, 1500x150 feet each; situated at the head of Lime Creek, Ten-mile district, and located in 1881; veins all fissures varying in width, and containing galena in a quartz gangue, yielding fairly; El Dorado Group developed by a shaft 160 feet deep and other workings, and Zip Coon by a shaft 150 feet deep and several small shafts and open cuts.

**Colorado Springs Prospecting and Mining Company (The).**—Incorporated under the laws of Colorado, in 1875; capital stock $100,000, in 5,000 shares of $20 each, non-assessable; secretary, E. M. Bartlett, Colorado Springs; agent, Victor G. Hills, Kokomo; owns eight claims, covering twenty-five acres; situated on Bartlett Mountain, Ten-mile district, and patented; veins all contacts from two to six feet in thickness, containing galena and carbonates, assaying twenty-five per cent lead and thirty-five ounces silver per ton; developments—mainly assessment work.



**Columbia Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, S. Donahu; secretary, J. A. Fisher; treasurer, J. Flusher—all Denver; general manager, Jacob Bergerman, Robinson; owns the Jack and Jill lodes, 1500x150 feet each, and the Denver placer, forty-five acres; situated on Ten-mile Creek, at Robinson, Ten-mile district, and located in 1881; vein in the lode claims a contact varying in width, and containing dolomite and galena, assaying fifty ounces silver per ton; developed by six shafts from 30 to 125 feet in depth and other workings.

**Commodore and Delaware Mining and Milling Company (The.)**—Incorporated under the laws of Iowa, in December, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, J. G. Newbald; secretary, J. B. Coate; treasurer, A. S. Hunter—all Mt. Pleasant, Ia.; vice-president, Wm. Mendenhall; superintendent, J. F. Cypher—both Decatur; offices Mt. Pleasant and Decatur; owns the Commodore and Delaware lodes, 1500x150 feet each; situated on the west slope of Decatur Mountain, one mile from Decatur, Peru district; located July 14, 1879, and in process of patent; vein a fissure from two to twelve feet wide, pay streak from six to thirty-six inches, containing galena, gray and yellow copper, in a quartz gangue, milling, when sorted, from 25 to 600 ounces silver per ton; the first-class ore yielding 600 ounces, the second-class 250 ounces, and the third-class 100 ounces silver; developed by a shaft 165 feet deep, with three levels running therefrom, 235, 100, and 90 feet in length, one 400-foot tunnel, cutting the vein at great depth, another shaft ninety feet deep, and other workings, exposing large ore-reserves; improvements—two ore-houses, etc.; output 800 tons, and it is estimated that there are 2,000 tons in sight.

**Commodore Placer.**—Owned by R. L. Nute and F. L. Bush, both Breckenridge; claim covers $8\frac{64}{100}$ acres; situated at the junction of Dry and Illinois Gulches, Minnesota district, one and one-half miles from Breckenridge; located in 1882, and patented August, 1882; developed by three shafts twelve feet deep each and two shafts forty and sixty feet in depth.

**Commune.**—150x1500 feet; situated on the south slope of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in October, 1880; owners Kasper Hoeffel and James Blanton, both Chihuahua; vein a fissure five feet wide, pay streak from three to six inches, containing galena and quartz, assaying twenty ounces silver per ton; developed by one drift on the vein fifty feet long.

**Complex Group.**—Owned by Henry Recen, Recen; group comprises the Complex, Hermit, Challenger, and Greenhorn, four adjoining claims on the same vein, 1500x150 feet each; situated on the east slope of Jacque Mountain, near Queen of the West mine; located in 1879; vein a fissure from four to thirty feet wide, containing dolomitic galena and sulphurets, assaying from 20 to 100 ounces silver per ton; developed by four shafts from twenty to seventy feet in depth, two tunnels twenty-eight and eighty feet in length, and other workings.

**Compton Combination.**—Owned by J. W. Swisher, Montezuma, and J. W. Pruitt, Kokomo; Combination consists of Compton, Clinton, and Ottawa lodes, covering about fourteen acres; situated on the south slope of Elk Mountain, Ten-mile district, one and one-half miles from Kokomo; located in December, 1879, and patented in August, 1882; vein a contact varying in thickness, containing decomposed matter and lead carbonates, assaying from eight to seventeen ounces silver and one-half ounce gold per ton; developed by three shafts from ten to twenty-two feet in depth, one on each claim, a tunnel 240 feet long, and other workings.

**Comstock.**—Owned by Daniel Kehoe and John O. Bryan, both Alma; claim 1500x150 feet; situated on Mount Quandary, Pollock district, ten miles from Breckenridge; located in 1880; vein a fissure varying in width, and containing gold and silver quartz (stamp-rock), yielding fairly, and iron and copper pyrites (smelting-ore), assaying $150 per ton; developed by a shaft twenty feet deep.

**Concordia.**—150x1500 feet; situated on the north-east slope of Frisco Mountain, eight miles from Breckenridge, Swan district; located in July, 1881; owner James Fryer, Baltimore, Md.; vein a fissure six feet wide, pay streak ten inches, containing yellow copper in a quartz gangue, milling, when sorted, twenty-six ounces copper and thirteen ounces silver per ton; developed by one eighty-six-foot shaft, two cross-cuts twenty and thirty-five feet long, and one sixty-foot level.

**Coney.**—Owned by E. U. Canfield and M. F. Blodgett, both Breckenridge, and others; claim 1500x150 feet; situated on the west slope of Fredonia Mountain, Argentine district, seven miles from Breckenridge, and located in 1874; vein a contact from five to ten feet wide, containing pockets of galena and carbonates, assaying from 25 to 150 ounces silver per ton; developed by a tunnel forty feet long, two inclines on the vein forty and thirty-five feet in length, and one cross-cut forty feet long.

**Connecticut and Illinois Mining Company (The).**—Incorporated under the laws of Illinois, in March, 1881; capital stock $40,000, in 400 shares of $100 each, non-assessable; president, Geo. F. Beardsley; vice-president, M. E. Stamey; secretary, J. J. Bogardus; treasurer, E. E. Goodrich—all Champaign, Ill.; general manager, C. I. Hayes, Breckenridge; offices Champaign, Ill., and Breckenridge; owns the Fredonia lode, 1500x150 feet; situated on the west slope of Fredonia Mountain, Argentine district, seven and one-half miles from Breckenridge; located in 1875, and patented; vein a contact three feet thick at the outcrop and ten in the breast of the tunnel, dipping twenty-two degrees, pay streak twelve inches, containing silver sulphides, gray copper, and galena, in a dolomite and quartz gangue, the first-class ore milling, when sorted, 150 ounces, and the second-class thirty ounces silver per ton; developed by three tunnels, 120, 50, and 30 feet in length, and other workings; improvements—tracks, cars, blowing apparatus for ventilating purposes, shaft-house, dwelling-houses, etc.; output 300 tons.

**Consolidated Fayette, No. 1 and No. 2.**—Two claims, 150x1500 feet each; situated on the Upper Blue River, seven miles from Breckenridge, Pollock district, and located in July, 1880; owners Jos. Hidy, Washington Court-house, Ohio, Jas. E. Johnson, Georgetown, and B. A. Arbogast, Breckenridge; vein a fissure six feet wide, pay streak from one to two inches, containing quartz and sulphurets, assaying thirty per cent lead and ten ounces silver per ton; developed by one ninety-five-foot tunnel and two twenty-foot shafts.

**Continental Gold and Silver Mining Company (The).**—Incorporated under the laws of Illinois, in 1880; capital stock $3,500,000, in 175,000 shares of $20 each, non-assessable; president and treasurer, L. C. Riggs, Chicago; vice-president, H. E. Wheeler; secretary, J. H. Bartlett—both Rockford, Ill.; general manager and superintendent, W. R. Thompson, Leadville; office Room 6 Quincy Block, Leadville; owns the Reconstruction Group, ten claims: Reconstruction, Hamilton, Silver Cloud, Edwin Forrest, Forest City, Pittsburgh, Bessie, Addie, Little Silver, and Lule, 1500x150 feet each; situated on Copper Mountain, Ten-mile district, near Kokomo; located between 1878 and 1881; veins all contacts varying in thickness, and containing dolomite, carbonates, and sulphurets, and assaying fairly; developed by 1,200 feet of tunnels and shafts, and other workings; and the Rattler, Oriental, and one-half interest in the Big Horn lodes, covering a tract of thirteen acres; situated on Sheep Mountain, adjoining the Gray Eagle Group, Ten-mile district, one-half mile from Robinson; located in 1878, and in process of patent; veins all contacts from two to three feet in thickness, containing dolomite and galena, assaying fifty ounces silver per ton; Rattler developed by a shaft 75 feet deep, and 100 feet of other shafting; an interest in the Spotted Tail and Spotted Tail No. 2 (the other interest owned by H. T. Johnson), covering seven acres; situated on the east slope of Jacque Mountain, Ten-mile district, one-quarter mile from Kokomo; located in 1880, and in process of patent; vein a contact from six to thirty-six inches, containing galena, sulphurets, and carbonates, in a dolomite gangue, milling, when sorted, forty ounces silver per ton; developed by a tunnel 200 feet long, and other workings; and the Golden Queen Group, five claims: Golden Queen, Juliana, Central, Bijou, and Arabic, 1500x150 feet each; situated on Jacque Mountain, Ten-mile district; located in 1878, and in process of patent; veins all contacts varying in width, and containing silver sulphurets in a quartz gangue, and yielding fairly; developed by 400 feet of tunnels and shafts, and other workings.



**Cooper.**—150x1500 feet; situated on the west slope of Gold Hill, one-half mile from Preston, Union district; located in August, 1882; owners D. J. Thompson, Preston, and Frank Cooper, Breckenridge; vein a fissure two feet wide, pay streak two inches, containing galena, iron pyrites, and quartz, assaying forty-five per cent lead and from twenty to forty ounces silver per ton; developed by one eighteen-foot shaft.

**Copper Bottom.**—Owned by T. S. Davis and T. E. Kleckner, both Breckenridge; claim 1500x150 feet; situated on Silver Hill, Spaulding district, two miles from Frisco; located in 1880; vein a fissure six feet wide, seamed with gray copper, assaying sixty-eight ounces silver per ton; developed by a shaft twenty-two feet deep and a twenty-five-foot incline from bottom of shaft.

**Copper Group.**—Comprising the Copper King, Copper Queen, and Copper Jack; owned by H. E. Taylor, E. J. Collingwood, J. Tippett, Moses Ingram, and J. B. Dewers, all Breckenridge; claims 1500x150 feet each; situated on Boulder Creek, Wilkinson district, fourteen miles from Dillon; located in 1882; veins all fissures from five to seven feet in width, pay streaks twenty inches, containing quartz, galena, and copper, assaying $38 per ton; developed by five shafts from ten to twenty feet in depth.

**Copper Point Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, R. B. Stapp; office Breckenridge, Colo.; owns the Rainbow lode, 1500x150 feet; situated on Warrior's Mark Mountain, McBarnes district, seven miles from Breckenridge; located in November, 1881; vein a fissure varying in width, containing galena and quartz, assaying fifty ounces silver per ton; developments—assessment work.

**Copper Queen Group.**—Five claims, 150x1500 feet each, viz., Copper Queen, Solitary, Big Bonanza, Pleasant Hill, and Pacific; the last owned by Matthias Hofwimer alone, and the others by Matthias Hofwimer, R. M. Staley, Jos. Finnegan, and James Tooley, all Breckenridge; group situated on the north side of Silver Lake, five miles from Breckenridge, Pollock district; located in April, 1882; veins all fissures from two to four feet wide, pay streaks from ten to twenty inches, containing quartz, sulphurets, chlorides, and

galena, assaying from 100 to 150 ounces silver per ton; in the Solitary there is probably $10 gold per ton; developments—two shafts fifteen and twelve feet deep and four tunnels from fifteen to twenty feet in length.

**Cora Belle and Pride of the West.**—Owned by Richard Fair and Silas Durkee, both Georgetown; claims 1500x150 feet each; situated on Edwards Mountain, Peru district, three miles from Decatur; located in 1880; veins both fissures from twelve to eighteen feet wide, pay streaks from six to fifteen inches, containing quartz, galena, and sulphurets, assaying 300 ounces silver per ton; developed by two adits fifty-two and fifty-five feet in length, and other workings.

**Creedmoor.**—Owned by C. A. and G. B. Walker, and J. R. Wilson, all Breckenridge; claim 1500x150 feet; situated on the divide between North and Middle Swan Rivers, four miles from Swan City; located in 1881; vein a fissure four feet wide, pay streak four inches, containing galena and quartz, assaying twenty-five ounces silver per ton; developed by a tunnel fifty feet long.

**Crescent Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in April, 1880; capital stock $1,000,000, in 50,000 shares of $20 each, non-assessable; president, John R. Bensley; vice-president, Jeremiah Collins; secretary, H. H. C. Miller; treasurer, H. A. Rust; general manager, Van H. Brooks; office 602 Harrison Avenue, Leadville, and 159 Dearborn street, Chicago; owns the Crescent and Orofino lodes, 1500x150 feet each; situated on Sheep Mountain, Ten-mile district; located in 1878, and in process of patent; vein a contact from two to thirty-two inches in thickness, containing dolomite and galena, assaying from $25 to $75 per ton; developed by a tunnel 430 feet long, a shaft forty feet deep, and forty feet of drifts.

**Crœsus.**—Owned by F. X. Miller, Swan City; claim 1500x150 feet; situated on the north slope of Imperial Mountain, Augusta district, seven miles from Swan City; located in 1881; vein a fissure four feet wide, containing quartz, galena, and sulphurets, assaying fifteen ounces silver per ton; developments—one twenty-foot shaft.

**Crœsus Mining, Milling, and Smelting Company (The).**—Incorporated under the laws of Colorado, March 22, 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, B. T. Vaughan; vice-president, John McNichols; secretary, D. T. Mitchell; general manager, W. H. Bergen—all Kokomo; owns the Nova Scotia Boy, Nova Scotia Boy No. 2, and an undivided one-half interest in the Warrior's Mark, covering in all twelve acres; situated on Fletcher Mountain, Ten-mile district, three miles from Kokomo; veins all fissures from three to eight feet in width, pay streaks from one to eighteen inches, containing galena and iron in a dolomite gangue, milling, when sorted, twenty per cent lead, three-tenths ounce gold, and eighty ounces silver per ton; developed by a tunnel fifty feet long and three shafts eight feet deep each.

**Crome Placer.**—Twenty-seven acres; situated in Indiana Gulch, beginning three miles above Breckenridge and extending to Argentine; located in 1873; owners S. P. Conger, Argentine, and S. F. Powell, Denver; developments—200 feet of fluming; worked by ground sluice.

**Cross.**—1500x150 feet; situated on the crest of Mineral Hill, three miles east of Breckenridge, Bevan district; located in January, 1882; owners Jno. M. Mairs, R. W. Foote, and Jas. Leonard, all Breckenridge; vein a fissure four feet wide, pay streak nine inches, containing galena, iron oxides, and quartz, assaying fifty per cent lead and twenty-two ounces silver per ton; developed by one shaft forty feet deep.



**Crown Point.**—(See Graphic Consolidated Mining Company.)

**Crystal Group.**—Owned by Perry H. Brandon, Robinson; group comprises the Crystal, Richmond, and Revenue lodes, 1500x150 feet each; situated on the west slope of Fletcher Mountain, Ten-mile district, two miles from Robinson; located from 1879 to 1882; veins all contacts from sixteen to thirty-two inches in thickness, containing galena in a dolomite gangue; developed by five tunnels from twenty to fifty feet in length, and other workings.

**Crystal Lake Mining and Milling Company (The).**—Incorporated under the laws of Connecticut in 1879; capital stock $100,000, in 4,000 shares of $25 each, non-assessable; president, A. R. Chisholm, New York; secretary, W. H. Watson, Bridgeport, Conn.; treasurer, David S. Draper, Nahant, Mass.; general manager, John E. Devlin, Jr., Alma; offices Bridgeport and Alma; owns four claims, viz.: Vandamoer, D. P. Morgan, Little Emma, and David S. Draper, 1500x150 feet each; situated on North Star Mountain, Pollock district, seven miles from Alma; located in 1879, and in process of patent; vein a blanket from ten to sixty feet thick, containing auriferous quartzite, assaying $10 per ton, although there are pockets yielding as high as $35 per ton; developed by three tunnels, seventy-five, thirty, and twenty-five feet in length, and two open cuts; and has in course of erection a reduction-works adjoining the lode claims, on North Star Mountain, to contain one Foster Crusher, Hoyt Pulverizer, and Amalgamation Tables, etc., Westinghouse engine, boiler, etc.

**Cucumber.**—(See Iowa and Cucumber.)

**Cumberland.**—150x1500 feet; situated on the east slope of Keystone Mountain, three miles from Montezuma, Beaver Dam district, and located in September, 1880; owner S. D. Plummer, Warren's Station (Heywood P. O.); vein a fissure three feet wide, pay streak five inches, containing gold-bearing quartz, assaying $45 per ton; developed by one fourteen-foot shaft.

**Cumberland Mining and Milling Company (The).**—Incorporated under the laws of New York, in July, 1881; capital stock $500,000,in 100,000 shares of $5 each; president, Jno. H. Korff; vice-president, Geo. W. Marston; secretary and manager, H. S. Vanderbilt—all New York; general manager, B. A. Whiteman, Breckenridge; offices corner of Pearl and Broadway, New York, 18 P. O. Square, Boston, and at Breckenridge; owns three claims, 150x1500 feet each, viz., Cumberland, Halifax, and First Discovery; situated on the north-west slope of Nigger Hill, three miles from Breckenridge, and located in 1879, '80, and '81; veins all contacts from two to twenty feet in width, containing decomposed porphyry, carrying gold, iron oxides, and lead carbonates, the gold-bearing ore milling, when sorted, $18 gold and six ounces silver per ton, and the silver-bearing ore fifty-two per cent lead, forty ounces silver, and $2 gold per ton; developments—five shafts, 100, 30, 20, 10, and 10 feet deep, and two levels forty and fifteen feet long, and other workings.

**Cunard Mining Company (The).**—Incorporated under the laws of Colorado, in October, 1881; capital stock $1,000,000, in 100,000 shares of $10 each; president, J. Sherman Hall; secretary and treasurer, A. G. Proctor—both Chicago; manager, Frank D. Bacon, Breckenridge; office 37 South Water street, Chicago, and at Breckenridge; owns two claims, 150x1500 feet each, viz.: Lucky, situated on the crest of Mineral Hill, four miles from Breckenridge, Bevan district, and located in 1880, and in process of patent; vein a fissure twenty inches wide, pay streak from four to twenty inches, containing galena and some quartz, milling, when sorted, sixty per cent lead and twenty-six ounces silver per ton; developed by three shafts, 136, 157, and 60 feet deep, with connecting levels aggregating 425 feet, and other workings; oper-

ated by a steam-hoister, the latter driven by a fifteen-horse-power engine and boiler; output 100 tons; and the Peerless, situated in Brown's Gulch, one mile from Swan City, Swan district, and located in June, 1881; vein a fissure varying in width, and bearing quartz, assaying from one-half to one ounce gold per ton; developed by one tunnel 125 feet long and other workings.

**Curtis, Little Maud, and Brooklyn.**—Three claims, 150x1500 feet each; situated on the west slope of Buffalo Mountain, five miles from Frisco, Ten-mile district, and located in July, 1881; owners V. J. Coyne, G. F. Roth, C. C. Royce, and Harry Evans, all Frisco; veins all fissures from four to sixteen feet wide, pay streaks from four to twelve inches, containing galena and quartz, assaying thirty per cent lead and thirty-five ounces silver per ton; developed by three tunnels from twenty to twenty-five feet long.

**Cyrus.**—150x1500 feet; situated on the west slope of Argentine Hill, four miles south of Argentine, Argentine district; located in January, 1882; owners J. E. Wannamaker, Golden, J. W. McNeely, Denver, and J. E. Dronberger, Argentine; vein a fissure six feet wide, pay streak nine inches, containing galena, brittle silver, and quartz, assaying from 10 to 150 ounces silver per ton; developed by one twenty-five-foot shaft.

**Czar.**—Owned by Geo. McAdams and S. R. and W. A. Lyon, all Montezuma; claim 1500x150 feet; situated on the north-west slope of Independente Mountain, Snake River district, two and one-half miles from Montezuma; located in October, 1881; vein a fissure nine feet wide, pay streak from six to fifteen inches, containing galena and gray copper in a quartz gangue, milling, when sorted, sixty per cent lead and 100 ounces silver per ton; developed by a cross-cut tunnel 400 feet long, eighty feet of which is on the vein, and other workings.

**D. M. Hickman Group.**—Five claims, 300x1500 feet each, viz.: D. M. Hickman, Denver City, Pilot, Hancock, and Cross; situated on the north-west slope of Cooper Mountain, one mile from Chihuahua, Peru district; the first located in October, 1880, and the others in October, 1881; owners D. M. Hickman, Las Vegas, N. M., and John Herman, Chihuahua; veins all fissures from one to sixteen feet wide, pay streaks from two to nine inches, containing galena, gray copper, and quartz, assaying from 10 to 150 ounces silver per ton; developed by one twenty-foot shaft, one sixteen-foot drift, and three ten-foot adits.

**D. S.**—150x1500 feet; situated on the west slope of Red Peak, eight miles from Frisco, Wilkinson district; located in August, 1881; owner Jno. P. Scarff, Frisco; vein a fissure eighteen inches wide, pay streak four inches, containing silver sulphurets and quartz, assaying from ten to thirty ounce. silver per ton; developed by one twenty-foot shaft and one five-foot open cuts

**Daisy.**—150x1500 feet; situated on the east slope of Rexford Mountain, one-half mile from Rexford, North Swan district, and located in July, 1882; owners Daniel Patrick, W. H. Shaw, Wm, Galbraith, Henry Braden, and John King, all Rexford; vein a fissure three feet wide, pay streak from nine to fourteen inches, containing quartz carrying gold and silver, and assaying sixty ounces silver per ton; developed by one shaft thirty-five feet deep.

**Dark King.**—150x1500 feet; situated on the south slope of Aiken Mountain, one-half mile from Rexford, North Swan district, and located in June, 1881; owners Henry Braden and Daniel Patrick, both Rexford, Lambert Gleason, Swan City, Jos. Finnegan, Breckenridge, and L. D. Rounds, Iowa; vein a fissure six feet wide, pay streak seventeen inches, containing galena and quartz, assaying fifty-five per cent lead and fifty ounces silver per ton; developed by one shaft 100 feet deep and other workings.



**Dead Rabbit.**—150x1500 feet; situated on the west slope of Gold Hill, one-half mile from Recen, Ten-mile district, and located in 1879; owners August Carlson, Frank Lindgreen, and John Pearson, all Kokomo; vein a fissure from two to five feet wide, containing gold quartz and galena, milling, when sorted, one-half ounce gold and fourteen ounces silver per ton; developed by one fifty-five-foot shaft, one forty-foot tunnel, and one seven-foot drift.

**Deadwood.**—150x1500 feet; situated on the top of Mineral Hill, three miles from Breckenridge, Bevan district, and located in May, 1880; owners Jno. Mairs, Robt. W. Foote, and A. M. Rich, all Breckenridge, and A. K. Stiles, Chicago; vein a fissure thirty inches wide, pay streak nine inches, milling $40 per ton, net; developed by two shafts twenty and twenty-five feet deep.

**Defiance.**—Owned by J. D. Feidt and Geo. E. Kedzie, both Chihuahua; claim 1500x150 feet; situated on the east slope of Cooper Mountain, Peru district, three miles from Chihuahua, and located in 1881; vein a fissure three feet wide, with two pay streaks aggregating fourteen inches, and containing quartz, galena, and some brittle silver, assaying twenty per cent lead and from 50 to 400 ounces silver per ton; developed by two shafts twelve feet deep each and 400 feet apart.

**Delaware.**—(See Commodore and Delaware Company.)

**Delaware Extension.**—Owned by John Gates and Wm. T. Reynolds, both Georgetown, and others; claim (fractional) situated on the west slope of Decatur Mountain, Peru district, one mile from Decatur; located in 1880, and patented in 1881; vein a fissure from one to twelve feet wide, pay streak from six to twenty-four inches, containing galena, gray copper, and quartz, assaying from 25 to 400 ounces silver per ton; developed by a forty-foot shaft.

**Dell-Bucket.**—Owned by J. F. Collins and Frank R. Themer, both Breckenridge; claim 1500x150 feet; situated on Carbonate Hill, three and one-half miles from Breckenridge; located in 1880; vein a contact eighteen inches thick, pay streak six inches, containing gold and silver quartz, assaying one ounce gold and twenty ounces silver per ton; developed by a tunnel 118 feet long and other workings.

**Delmonico.**—150x1500 feet; situated on the east slope of Jacque Mountain, one-half mile from Kokomo, Ten-mile district; located in June, 1879, and in process of patent; owners the Bonanza Gold and Silver Mining Company, T. C. McDevitt, and Wash. L. Biggs, both Leadville; vein a fissure from five to ten feet wide, pay streak twenty inches, containing galena in a quartz gangue, milling, when sorted, from $30 to $50 per ton; developed by 400 feet of tunneling and drifting and one shaft 120 feet deep.

**Delta.**—(See Alpha and Delta.)

**Delta.**—Owned by H. G. Denniston, Chihuahua; claim 1500x150 feet; situated on the north slope of Collier Mountain, Peru district, one and one-half miles from Chihuahua; located in August, 1881; vein a fissure ten feet wide, pay streak from one to three feet, containing galena and copper pyrites in a quartz gangue, milling, when sorted, fifteen per cent lead and twenty-five ounces silver per ton; developed by a fifteen-foot shaft and a forty-foot drift on the vein.

**Democrat.**—150x1500 feet; situated on the south-east slope of Independence Mountain, three and one-fourth miles from Montezuma, Snake River district, and located in September, 1880; owners Albert Penery, Jno. T. Murphy, Wm. Keough, and D. Dougherty, all Montezuma; vein a fissure forty

inches wide, pay streak eighteen inches, containing galena and some chlorides in a quartz gangue, milling, when sorted, twenty-six ounces silver per ton; developed by one twenty-foot shaft.

**Denver.**—(See D. M. Hickman Group.)

**Denver Group.**—Comprising the Denver, Brigham, Queen of the West, and Tidal-wave lodes; owned by G. W. Davidson, R. M. Fanning, Thomas Kaub, and others, Breckenridge; claims 1500x150 feet; situated in Pennsylvania Gulch, Upper Blue district, four miles from Breckenridge, and located in 1882; veins all contacts averaging three feet in thickness, and containing gold and silver quartz, assaying twenty ounces silver and some gold per ton; developed by four twenty-foot open cuts.

**Derby, Nos. 1, 2, and 3.**—Three claims, 150x1500 feet each; situated on the west slope of Bald Mountain, three and one-half miles from Breckenridge, Argentine district, and located in May, 1882; owners E. J. Collingwood and P. H. McCrickett, both Breckenridge; vein a fissure forty feet wide, containing streaks of a gray copper ore, yielding fairly; developed by three shafts, 10, 15, and 105 feet in depth.

**Deserted.**—150x1500 feet; situated on the east slope of Wheeler Mountain, one mile from Wheeler, Ten-mile district, and located in August, 1881; owners A. Dolan, Wheeler, and Timothy Kaye, Pueblo; vein a fissure thirty inches wide, pay streak ten inches, containing mineralized quartz, assaying twelve ounces silver and some gold per ton; developed by two shafts, twelve and fifteen feet deep, and one twenty-two-foot open cut.

**Deserter.**—150x1500 feet; situated on the east slope of Boulder Creek, twenty miles from Frisco, Wilkinson district; located in August, 1881; owners T. P. Kent and Adolph Ballif, both Frisco; vein a fissure twelve inches wide, containing galena, gray copper, and quartz, assaying from 50 to 200 ounces silver per ton; developed by one tunnel ten feet long.

**Dexter.**—150x1500 feet; situated on Boulder Creek, fifteen miles from Frisco, Wilkinson district; located in October, 1881; owners J. V. Brown and J. J. Clinton, both Frisco; vein a fissure three feet wide, pay streak from six to ten inches, containing gray copper and galena in a quartz gangue, assaying fairly; developed by one ten-foot open cut.

**Diamond.**—150x1500 feet; situated on the west slope of Silver Mountain, three-quarters mile from Chihuahua, Peru district; located in September, 1882; owners Philip Runyon, Chihuahua; vein a fissure eighteen inches wide, containing bismuth, quartz, and galena, assaying from 50 to 500 ounces silver per ton; developed by a twenty-five-foot open cut with an eighteen-foot face.

**Diamond State Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, H. C. Conrad; vice-president, Wm. M. Pyles; secretary, Joshua Morris; treasurer, C. F. Thomas—all Wilmington, Del.; superintendent, J. W. Allen, Farnham; offices Wilmington and Farnham; owns the Warrior's Mark No. 3, Grand Prize, Silver King, Silver Prize, Iron Rod, and another claim, 1500x150 feet each; situated in McBarnes district, seven miles south-east of Breckenridge; located in 1881; veins all fissures from two to thirty-two inches wide, containing galena, gray copper, and quartz, assaying from $50 to $500 per ton; developed by a number of shafts from 10 to 150 feet in depth and 500 feet of tunnels.



**Dixon Placer.**—Owned by Mrs. Kate McDonald, D. Solomon, and Geo. Goodier, all Breckenridge; claims cover sixty acres; situated on the west side of the Blue River, one-half mile from Breckenridge; located in 1881; developed by 700 feet of open cuts and 200 feet of flumes; worked by ground sluice.

**Dixie Group.**—Owned by Joseph K. Wilson, Chihuahua, and H. M. Mefford, and S. J. Weber, both Hunnewell, Mo.; group comprises the Dixie, John B. Gordon, Missouri Boy, Fannie Carr, Mattie B. Keller, Carrie B. Keller, Jenny Lind, Little May, Baby, and Shelley, 1500x150 feet each; situated on the crest of Dixie Mountain, Peru district, two miles north of Chihuahua; located in 1881; veins all fissures from five to twenty feet wide, pay streaks from six to seventy-five inches, containing galena, gray and yellow copper, and quartz, assaying from 25 to 500 ounces silver per ton; developed by ten adits, one on each claim, twenty feet long and twelve feet deep each, three fifteen-foot drifts, one twelve-foot shaft, and one tunnel fifty feet long, designed to open up the veins on the entire group.

**Dodge Group.**—Owned by J. W. Dodge, Breckenridge, and William Quayle, Denver; group comprises the El Dorado, Shark, L. A. D., and Euclid lodes, 1500x150 feet each; situated on Nigger Hill, Avalanche district; located in 1882; veins all contacts from four to ten feet in thickness, through the vein-matter of which is scattered galena and lead carbonates, assaying forty per cent lead and from thirty to sixty ounces silver per ton; developments—a tunnel eighty feet long and a shaft thirty feet deep.

**Dolan Group.**—Owned by Edward Dolan and Edward Bennett, both Robinson; group consists of five claims, covering twenty-six acres; situated on Sheep Mountain, near Crown Point mine, one-half mile from Robinson; located in 1881; veins all contacts from four to six feet in thickness, containing dolomite, galena, and carbonates, assaying twenty per cent lead and ten ounces silver per ton; developed by a sixty-foot shaft and five other shafts ten feet deep each.

**Don Pedro.**—Owned by Oliver Milner and others, Montezuma; claim 1500x150 feet; situated on the east slope of Independence Mountain, Snake River district, two and one-half miles from Montezuma; located in 1876, and patented in 1882; vein a fissure five feet wide, pay streak from six to twelve inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and from fifty to seventy ounces silver per ton; developed by four adits from twenty-five to thirty-five feet in length, a tunnel 105 feet long, and other workings.

**Dorsey Group.**—Owned by J. S. Wheeler and W. A. McCollum, both Wheeler, Ferdinand Kincaid, Ashcroft, and Thomas Dorsey, Illinois; group comprises the Dorsey, Nos. 1, 2, 3, 4, and 5, 1500x150 feet each; situated on the east slope of Copper Mountain, Ten-mile district, two and one-half miles from Wheeler; located in 1880; veins all contacts, from two to four and one-half feet in width, pay streaks from six to twelve inches, containing dolomite and galena, assaying forty per cent lead and from ten to sixty ounces silver per ton; developed by five shafts from thirty to seventy-five feet in depth, an eighty-eight-foot tunnel, a seventy-five-foot incline, and other workings; output twenty tons.

**Dry Placer.**—Owned by George Puterbaugh, Breckenridge, Josiah Crotty, Peoria, Ills., and F. Hughes, Keokuk, Ia.; claim thirty-four acres; situated on the west slope of Nigger Hill, adjoining the Mayo and Berline placers, two miles from Breckenridge; patented in April, 1880; across which extends a porphyry dike, known to have two carbonate contacts underlying it;

developments—seven shafts from fifty to seventy-five feet in depth, two ditches, and some flumes. (The Silver King lode, 150x1500 feet, is situated on this placer, on which is sunk a seventy-foot shaft, showing the first contact.)

**Dubuque and Breckenridge Mining Company (The.)**—Incorporated under the laws of Colorado, in June, 1882; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president, J. K. Graves, Dubuque, Ia.; vice-president, H. M. Harford, Blairstown, Ia.; secretary and treasurer, E. A. Gooding; superintendent, W. A. Gooding—both Breckenridge; offices Dubuque and Breckenridge; owns the Franklin lode, 150x1500 feet; situated on the crest of Mineral Hill, four miles from Breckenridge, Bevan district; located in July, 1880; vein a fissure six feet wide, pay streak from fifteen to thirty inches, containing galena in a quartz gangue, milling, when sorted, fifty-five per cent lead and forty ounces silver per ton; developed by two shafts thirty-five and seventy feet deep, and other workings.

**Duhalla.**—150x1500 feet; situated on the south slope of Silver Mountain, one-half mile from Chihuahua, Peru district, and located in 1879; owner James Noonan, Decatur; vein a fissure five feet wide, pay streak from fifteen to twenty inches, containing gray copper in a quartz gangue, and assaying fairly; developed by one shaft twenty-five feet deep.

**Duplicate.**—(See Ohio and Duplicate.)

**Dushare.**—150x1500 feet; situated on the west slope of Argentine Mountain, seven miles from Breckenridge, McCollum district, and located in June, 1880; owner T. W. Graves, Breckenridge; vein a fissure nine feet wide, with two pay streaks, one on hanging-wall ten inches wide, containing galena and quartz, and one on foot-wall four inches wide of quartz and gray copper, assaying from thirty to fifty ounces silver per ton; developed by one seventy-two-foot shaft.

**Eagle and Gray Eagle.**—Two claims, 150x1500 feet each; situated on Dianthe Mountain, near the Dianthe mine, three and one-half miles from Breckenridge, and located in 1880; owners A. B. Seybolt and W. D. Churchell, both Breckenridge; vein a fissure eighteen inches wide, containing gold-bearing quartz, assaying $35 per ton; developed by two shafts fifty and twenty-five feet deep.

**Eagle.**—(See Raven and Eagle.)

**Earl Tunnel Group.**—Comprising the Home-stake, Pierce D., George C., and Leabold lodes, 1500x150 feet each; owned by G. T. Metzger and J. L. Deming, both Breckenridge; group situated on Nigger Hill, Bevan district, three miles from Breckenridge, and located in 1881; veins all fissures from three to six feet wide, pay streaks six inches, containing galena and porphyry, assaying at surface thirty per cent lead and fifteen ounces silver per ton; developed by four shafts from fifteen to thirty-five feet in depth and one tunnel forty feet in length designed to cut the veins on all the claims.

**Eau Claire Prospecting and Mining Company (The).**—Incorporated under the laws of Wisconsin, in 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, D. W. Day; secretary and treasurer, Earle Snodgrass, Eau Claire, Wis.; general manager, T. A. Fellows, Leadville; office Eau Claire and Leadville; owns the Dr. Day, Tim Key, S. D. Piper, Gift, Terror, Peifer, Lydia, Gibson, and ten others; claims 1500x150 feet each; situated on the south slope of Gibson Mountain, Ten-mile district, four miles from Wheeler, and located in 1880; veins all fissures from one



to six feet in width, containing galena in quartz carrying gold, assaying from ten to sixty ounces silver and from $1 to $15 gold per ton; developed by seventeen shafts twenty feet deep each and one tunnel seventy-five feet long.

**Ebert, Cobb & Co.'s Placer.**—160 acres; situated in French Gulch, at Lincoln, and located in 1860, and patented in 1878; owners estate of F. J. Ebert, J. J. Cobb, and J. W. McKinnie, all Denver; developments—four miles of ditching worked by a boom; production probably $3 per day per man.

**Ebenetta.**—150x1500 feet; situated on the north-west slope of Brooks Hill, one and a half miles from Argentine, Minnesota district, and located in February, 1881; owners, T. E. Eastland and C. W. Bates, both Argentine; vein a fissure four feet wide, pay streak four inches, containing quartz, galena, and brittle silver; developed by two shafts fifteen feet deep each.

**Eckhardt Group.**—(See Swan River Placer Mining Company.)

**Eclipse.**—100x1600 feet; situated on the east slope of Glacier Mountain, two and a half miles from Montezuma, Snake River district, and patented in 1871; owners H. M. Teller, Denver, and G. H. Buell, Central City; vein a fissure ten feet wide, pay streak seven inches, containing quartz with pockets of sulphurets and native silver, and some galena, milling, when sorted, 400 ounces silver per ton; developed by two shafts fifty feet deep each, one level sixty feet long, and several open cuts; output probably fifty tons.

**Eclipse Mining and Milling Company (The.)**—Incorporated under the laws of Colorado; president, S. W. Pollard, Boston; manager, B. A. Whiteman, Breckenridge; office 18 P. O. Square, Boston; owns two claims, 150x1500 feet each, viz., Eclipse No. 1 and No. 2; situated on the north-west slope of Nigger Hill, two miles from Breckenridge, Bevan district; located in 1881; vein a fissure five feet wide, containing decomposed porphyry carrying gold, iron oxides, and lead carbonates of the same character as the Cumberland ore; developments—three shafts, fifty, ten, and ten feet deep, and other workings.

**Edith.**—150x1500 feet; situated on the east slope of Jacque Mountain, one mile from Recen, Ten-mile district; located in 1882; owner S. D. Piper, Recen; vein two feet thick, containing dolomite and galena, assaying twenty per cent lead and twelve ounces silver per ton; developed by one tunnel fifty feet long.

**Eighteen Seventy-six.**—Owned by Perry H. Brandon, Robinson and estate of B. F. Brandon; claim 1500x150 feet; situated at the head of Clinton Gulch, Ten-mile district, two and one-half miles from Robinson; located in 1876; vein a contact from twenty to thirty feet in width, pay streak from four to twenty-two inches, containing dolomite, galena, brittle silver, and gold, assaying from 50 to 150 ounces silver and from one to three ounces gold per ton; developed by a shaft fourteen feet deep and two tunnels twenty-five and fifty feet in length.

**Eldorado.**—(See Dodge Group.)

**Eldorado.**—Owned by W. H. and M. M. Howe, both Quandary City; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, nine miles from Breckenridge; located in 1879; vein a blanket six feet thick, pay streak from eight to thirty inches, containing gold-bearing quartz (stamp-rock), yielding fairly, iron pyrites and yellow copper (smelting-ore), milling, when sorted, $100 per ton in gold and silver; developed by two

inclines fifteen and fifty feet in length, three drifts, seventeen, thirty, and seventy-five feet in length, and one open cut 100 feet long; output 150 tons shipped.

**El Paso Mining Company (The).**—Incorporated under the laws of Colorado, May 20, 1877; capital stock $100,000, in 5,000 shares of $20 each, non-assessable; president, C. R. Bliss; vice-president, John Stanley, Sr.; treasurer, E. M. Bartlett—all Colorado Springs; office Colorado Springs; owns the Connie Bell Tunnel site, 3000x6 feet, and Lady Harvard lode, 1500x150 feet; situated on Bartlett Mountain, Ten-mile district; located in 1877; vein a contact varying in thickness, containing carbonates in a dolomite gangue, milling, when sorted, from six to twelve ounces silver per ton; a tunnel is driven on the tunnel site 420 feet long, on the lode claim a drift thirty feet long.

**Eliza Jane (or American Eagle).**—J. D. Feidt, Chihuahua, W. S. Ballou, Leadville, George Densmore and George Hunt, both Georgetown, and George La Fountain, Monroe, Michigan, owners; claim 1500x150 feet; situated on the west slope of Lenawee Mountain, Peru district, two and one-half miles from Chihuahua; located in August, 1880, and patented in 1881; vein a fissure from three to twelve feet wide, pay streak six inches, containing galena, sulphurets, gray copper, and quartz, assaying from 50 to 1,000 ounces silver per ton; developed by an adit twenty feet long and a shaft fifty-four feet deep.

**Elk Horn.**—Owned by D. W. Lash, H. H. Brown, and James Austergarde, all Breckenridge; claim 1500x150 feet; situated on the south slope of Nigger Hill, one mile from Breckenridge; located June 27, 1880, and in process of patent; vein a contact fourteen feet thick, pay streak from five to thirty inches, containing galena and gray copper in a porphyry gangue, milling, when sorted, fifty per cent lead, ten per cent copper, a trace of gold, and sixty ounces silver per ton; developed by a tunnel 130 feet long, a shaft 123 feet deep, and other workings; improvements—shaft and ore house; output 100 tons.

**Elk Mountain Mining and Smelting Company (The.)**—Incorporated under the laws of Colorado, in September, 1881; capital $3,000,000, in 300,000 shares of $10 each, non-assessable; president, George S. Miller, Leadville; vice-president, J. C. Morehouse, Robinson; secretary, C. C. Howell, Leadville; treasurer and manager, John J. Sipple, Kokomo; office 602 Harrison Avenue, Leadville, and Kokomo; owns the Argentine placer, 121 $\frac{2133}{1000}$ acres; situated on Elk Mountain, two and one-half miles from Kokomo, Ten-mile district; located in September, 1880, and patented in 1882; developed by one shaft ten feet in depth on every 150x1500 feet, and two shafts eighty feet deep each, showing a fissure vein two feet wide of quartz and galena, assaying thirty per cent lead and forty ounces silver per ton.

**Ella.**—150x1500 feet; situated on the top of Mineral Hill, three miles east of Breckenridge, Bevan district; located in May, 1880; owners R. W. Foote and Jas. Leonard, both Breckenridge, Geo. Riddle, Morris, Ills., and D. H. Leonard, Parkersburg, W. Va.; vein a fissure four feet wide, pay streak fourteen inches, containing galena, iron oxides, and quartz, assaying from twenty to thirty ounces silver per ton; developed by two shafts thirty-five and eighteen feet deep and other workings.

**Ella and Malinda Group.**—Seven claims, 150x1500 feet each, viz.: Ella, Malinda, Lost Boy, Last Chance, Sunken Rock, Garfield, and Moeltke; situated on the north slope of Keller Mountain, fifteen miles from Frisco, Wilkinson district; located in June, 1882; owners David McPherson, Louis Smalley, and John Hunter, all Frisco; veins all fissures from three to six feet wide, pay streaks from nine to eighteen inches, containing galena, gray copper, and quartz, assaying from 100 to 1,000 ounces silver per ton; developments—one seventy-two-foot tunnel on Ella, one forty-five-foot tunnel on Malinda, and assessment work on others.



**Ella B.**—Owned by F. C. Freeman, H. G. Sayles, and Eugene Owens, all Breckenridge, and Wm. Johns, Swan City; claim 1500x150 feet; situated three-fourths mile north-east from Breckenridge, Bevan district; located in 1882; vein a contact four feet wide, pay streak from three to ten inches, containing galena and porphyry, assaying forty per cent lead and thirty ounces silver per ton; developed by a tunnel 100 feet long and a twenty-foot shaft.

**Ella R. Group.**—Four claims, 150x1500 feet each, viz.: Ella R., Southern Boy, Occidental, and Little Minnie; situated on the south slope of Carbonate Hill, three miles from Breckenridge, Spaulding district; located in May, 1880; owners A. C. Lochhead, Breckenridge, G. W. Fallon, C. G. Perkins, and Joseph Beach, all Henderson, Ky., and S. D. Box, ——, Tex.; veins all fissures, averaging nine inches in width, and containing quartz and galena, assaying $6 per ton; developed by two shafts 150 and 52 feet deep and one tunnel 100 feet long; improvements—a whim for hoisting, shaft-houses, etc.

**Ellen K. and Libby Baker.**—Owned by A. A. Shaffer, W. H. Abbett, Hiram Johnson, and S. L. Winslow, all Breckenridge; claims 1500x150 feet each; situated on Boulder Creek, Wilkinson district, fifteen miles from Dillon; located in 1882; vein a fissure six feet wide, pay streak two feet, containing quartz, gray copper, and copper carbonates, assaying forty ounces silver per ton; developed by two shafts twelve and sixteen feet in depth.

**Ellison Ranch Group.**—Owned by B. G. Hodges and John Duers, both Breckenridge; group comprises the Ellison Ranch, War Eagle, Grass Valley, Rocky Mountain Rose, Dolly Varden, and Louisville lodes, 1500x150 feet each; situated on the crest of Gold Hill, five miles north-west of Breckenridge, and located in June, 1881; veins all nearly vertical contacts from four to fifteen feet in width, pay streaks from six to forty inches, containing gray copper, galena, and porphyry, assaying from 25 to 500 ounces silver per ton; developed by five shafts, one on each claim, from thirty to seventy feet in depth and other workings.

**Ellwood Group.**—Six claims, 150x1500 feet each, viz.: Leopard, Weld County, Lupton, Fulton, Alpine, and Sadie; situated on the crest of Independence Mountain, three and one-half miles from Warren's Station, Snake River district; located August, 1880; owners H. H. and C. W. Ellwood, Thos. M. Dooley, and F. B. Wineland, all Warren's Station (Heywood P. O.); veins all fissures, in the Leopard (an extension of the Hunkidori) five feet wide, pay streak twelve inches, containing quartz, galena, and sulphurets, and on the others from twenty to thirty inches wide of galena, copper carbonates, and decomposed matter, assaying in all the lodes from five to twenty ounces silver per ton; developed by six ten-foot shafts, one on each claim.

**Elmina.**—Owned by A. A. Shaffer, Eugene Owens, and Harry G. Sayles, all Breckenridge; claim 1500x150 feet; situated on Shock Hill, one mile from Breckenridge, and located in 1879; vein a contact from four to five feet thick, pay streak from fifteen to twenty inches, containing gold and silver quartz, assaying from $50 to $200 per ton; developed by a shaft thirty-five feet deep, a tunnel fifty-five feet long, one twenty-foot open cut.

**Elpan.**—Owned by Chris. Eschler and Chris. Berger, both Kokomo; claim 1500x150 feet; situated on the south slope of Copper Mountain, Ten-mile district, three miles from Kokomo, and located February 12, 1880; vein a contact varying in thickness, and containing galena; developed by a shaft fifty-eight feet deep.

**Emma.**—150x1500 feet; situated on the south slope of Decatur Mountain, one mile from Decatur, Peru district; located in October, 1881; owners John James and Omer Woodruff, both Montezuma; vein a fissure five feet wide, pay streak eight inches, containing galena and quartz, assaying twenty-five per cent lead and from 100 to 150 ounces silver per ton; developed by one drift forty feet long and one shaft thirty feet deep.

**Emma and Elk.**—Two claims, 150x1500 feet each; situated on the south slope of Kelleher Mountain, fourteen miles from Frisco, Wilkinson district; located in August, 1881; owners John J. Frank, John Dobb, James Kelleher, Joseph Hockham, and W. H. Crawford, all Frisco, and Fred Smith, Breckenridge; vein a fissure five feet wide, pay streak from six to ten inches, containing quartz and gray copper, assaying ten per cent lead and 100 ounces silver per ton; developed by three tunnels, fifty, seventy-five, and ninety-five feet long (Henry Stafford, Frisco, is an owner in the Elk).

**Emmet and Lowe Placers.**—Owned by D. Stettauer, Chicago, and Edward Lowe, Kokomo; claims cover 131 acres; situated on Ten-mile Creek, Ten-mile district, near Kokomo; patented in 1881; developments—ditches, sluices, etc., and worked by hydraulic pressure.

**Emperor.**—Situated on the south slope of Humbug Hill, one mile from Lincoln, Avalanche district; located in July, 1879; owners L. B. Wheeler, F. H. and Augustus Schmidt, and H. Stall, all Lincoln City; claim 150x1500 feet, containing three fissure veins, twelve, five, and five feet in width, the first composed of quartz and gray copper, assaying forty per cent copper and from 100 to 200 ounces silver per ton, and the others mineralized quartz; developed by a shaft sixty feet deep and one tunnel 150 feet long; output thirty tons.

**Empire.**—Owned by Dr. M. T. Armstrong, Montezuma, and Andrew Sweeney, Felix Gerard, and others, Chihuahua; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one mile from Decatur; located January 15, 1882; vein a fissure from two to four feet wide, containing galena, gray and yellow copper, and quartz, assaying from 50 to 200 ounces silver per ton; developed by a tunnel thirty feet long.

**Empire State Group.**—Six claims, 150x1500 feet each, viz.: Empire State, H. B. Turner, Grand Prospect, Julian, Cora E. Turner, and Don Juan; situated on the Swan River slope of Gleason Hill, at Swan City; located in 1879; owner H. B. Turner, Swan City; veins all fissures about three feet wide each, containing quartz and galena, assaying from $10 to $40 per ton in gold and silver, and there is also a deposit five feet thick, composed of an iron ore, assaying from $10 to $20 per ton in silver; developments—nine shafts from ten to thirty feet in depth.

**Empire State Group.**—Eleven claims, 150x1500 feet each, viz.: Empire State, Lulu B., Apollo, Saturday Night, Frederica, Frederick R., Hillside, Ellen H., Flower City, Sample, and O. I. C.; situated on the south slope of Keller Mountain, at the head of Rock Creek, twenty-two miles from Frisco, Wilkinson district; located in June and July, 1882; owners G. F. Roth, C. W. Weis, H. E. Hoffman, and Wm. Clifford, all Frisco; veins all fissures from two to ten feet wide, pay streaks from five to forty inches, containing quartz and sulphurets, assaying from 50 to 150 ounces silver per ton; developed by twelve shafts from ten to eighteen feet in depth, one tunnel 100 feet long, and other workings.

**Empress.**—Situated on the east slope of Ruby Mountain, one and one-fourth miles from Decatur, Peru district; located in November, 1880; owners



N. P. Lewis, New York City, and W. T. Lewis, Decatur; vein a fissure four feet wide, pay streak fourteen inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and sixty-five ounces silver per ton; developed by two ten-foot shafts and one fourteen-foot adit.

**Empress Group.**—Comprising the Empress, America, Rosa Lee, Molgan, Happy Jack, and Miller lodes; owned by F. X. Miller, Swan City; claims 1500x150 feet each; situated on the south slope of Brewery Hill, Swan district, three miles from Swan City; located in 1880; veins all contacts from four to eight feet in width, containing hematite iron and iron pyrites, assaying from $8 to $80 per ton in gold and silver; developed by two shafts thirty-five feet deep each, two twenty-foot shafts, and one tunnel forty feet long; output twenty tons.

**Enterprise Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1883; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Jo. Reynolds; secretary, Geo. H. Laflin; treasurer, A. J. Cross—all Chicago; offices 165 Washington street, Chicago, and at Robinson; owns the Enterprise, General Jackson, and Bobtail lodes, 1500x150 feet each; situated on Sheep Mountain, Ten-mile district, one-half mile from Robinson; veins all contacts from two to six feet in width, containing galena and sandstone, assaying fifty ounces silver per ton; developed by a shaft 150 feet deep, and other workings.

**Erickson.**—150x1500 feet; situated on the south-west slope of Keystone Mountain, three and one-half miles from Montezuma, Snake River district; located in July, 1880, and patented in 1881; owners Jos. B. Erickson and the estate of Geo. B. Robinson; vein a fissure from ten to fifty inches in width, containing quartz and galena, milling, when sorted, forty per cent lead and twenty-five ounces silver per ton; developed by one shaft 100 feet deep and one fifty-foot drift.

**Erickson.**—150x1500 feet; situated at the head and on the east side of the North Swan River, one and one-half miles from Rexford, North Swan district, and located in August, 1882; owners W. and James Aiken, both Denver, and Nils Erickson, Rexford; vein a fissure eight feet wide, containing three feet of quartz carrying galena and assaying $30 per ton; developed by one tunnel fifty feet long and one shaft fifteen feet deep.

**Ernest.**—150x1500 feet; situated on the west slope of Ophir Hill, two miles from Frisco, Ten-mile district, and located in February, 1881; owners E. J. Groff and H. S. Hay, both Frisco, and C. F. Shedd, Fairfield, Neb.; vein a contact, a seventy-five-foot shaft and a seventy-two-foot tunnel showing galena and gray copper in the porphyry, assaying some copper and twenty ounces silver per ton.

**Essex Group.**—Owned by G. T. Murdock and R. I. Cahoon, both Kokomo; group comprises the Essex, Fort Henry, and Bomoseen lodes, covering twelve acres; situated on the south-west slope of Gold Hill, Ten-mile district, two miles from Kokomo; located in 1879, and patented in 1881; veins all contacts from four to sixteen feet in width, through the vein-matter of which is scattered galena and lead carbonates, assaying sixty per cent lead and fifty-two ounces silver per ton; developed by four shafts from 60 to 106 feet in depth and 100 feet of drifts.

**Etta.**—150x1500 feet; situated on the north slope of Keystone Mountain, three miles from Montezuma, Snake River district, and located in July, 1880; owners L. H. Flanders, Denver, and Robert McGuire, Montezuma; vein a fissure five feet wide, pay streak from six to eighteen inches, containing

quartz and galena, assaying forty per cent lead and twenty-five ounces silver per ton; developments—one thirty-five-foot shaft and one sixty-five-foot cross-cut.

**Euclid.**—150x1500 feet; situated on the west extension of Mount Gayot, five miles above Swan City, Carpenter district, and located in June, 1878; owners Otto Eckhardt and Fred. K. Wendt, both Lincoln; vein a contact from one to six feet thick, containing honey-combed quartz carrying gold and silver, milling, when sorted, $60 per ton; developed by two levels seventy and fifteen feet long, one shaft forty feet deep, and a series of openings, proving up the vein for 1,300 feet.

**Eunice.**—150x1500 feet; situated on the east slope of Ruby Mountain, one-half mile from Decatur, Peru district; located in 1881; owner John Addis, Denver, and others; vein a fissure five feet wide, containing quartz with sulphurets, assaying from 50 to 150 ounces silver per ton; developed by one tunnel 115 feet long, and other workings.

**Eureka.**—150x1500 feet; situated on the south-west slope of Carbonate Hill, three and one-half miles from Breckenridge; located in October, 1880; owners Jos. Everett and L. H. Bradshaw, both Denver, and R. H. White and Charles Bond, both Breckenridge; vein a fissure forty inches wide, containing carbonates and decomposed matter, assaying thirty-one ounces silver and some gold per ton; developed by one tunnel 140 feet long, and other workings.

**Eureka.**—1500x150 feet; situated on the east slope of Glacier Mountain, one mile from Montezuma, Snake River district; located in 1878, and in process of patent; owners J. F. Willis and Charles Buckland, both Montezuma; vein a fissure fifteen feet wide, pay streak from ten to thirty inches, containing galena, some gray copper, and zinc, in a quartz gangue, milling, when sorted, sixty per cent lead and fifty-five ounces silver per ton; developed by two cross-cut tunnels 150 and 275 feet long, the latter cutting the vein at a depth of 125 feet, with upraises from each to the surface, 350 feet of drifting on the vein, and other workings; improvements—ore-houses, etc.

**Eureka.**—Owned by G. W. Kesler, W. W. Perdy, and others, Decatur; claim 1500x150 feet; situated on the west slope of Gray's Peak, Peru district, two miles from Decatur; located in June, 1881; vein a fissure four feet wide, pay streak eight inches, containing galena and quartz, assaying at grass rots twenty-five ounces silver, and at a depth of eight feet fifty per cent lead and fifty ounces silver per ton; developed by two tunnels eight and ten feet in length.

**Eva and Percy L.**—Owned by L. Weber, Robinson, and H. C. Weber, Denver; claims 1500x150 feet each; situated on Chalk Mountain, Ten-mile district, two and one-half miles from Robinson, and located in 1881; vein a contact from six to twelve inches thick, containing galena, carbonates, and sandstone, assaying sixty ounces silver per ton; developed by two tunnels twenty and fifty feet in length.

**Eva Conway and Ida Brooks.**—Two adjoining claims on the same vein; owned by George Puterbaugh, Wm. Kellogg, J. M. Conway, and D. H. Donnelly, all Breckenridge, and G. W. James, Peoria, Ill.; claims 1500x150 feet each; situated on Donnelly Mountain, Upper Blue district, seven miles from Breckenridge, and located in 1880; vein a fissure five feet wide, seamed with gray copper, assaying from 69 to 104 ounces silver per ton; developed by two shafts thirty feet deep each and other workings.



**Eva E.**—150x1500 feet; situated on the north slope of Dianthe Mountain, one-half mile west of Argentine, and located in August, 1881; owners M. N. Whisler and T. E. Eastland, both Argentine, and Geo. Wilson, Denver; vein a vertical fissure, varying in width, showing antimonial silver in the quartz; developed by one ten-foot shaft.

**Eva L.**—Owned by Walter G. Haines and Andrew Hanson, both Kokomo; claim 1500x150 feet; situated on the east and west slopes of Fletcher Mountain, Ten-mile district, five miles from Kokomo, and located in 1881; vein a contact nine feet wide, pay streak from six to fifteen inches, containing sandstone, galena, and sulphurets, assaying from 50 to 150 ounces silver per ton; developed by a tunnel thirty-six feet long.

**Eva May.**—Owned by F. P. Rosengarten, L. R. Evans, and Du Bois Bros., all Jamestown; claim 1500x150 feet; situated one-half mile south-east of Chihuahua, Peru district, and located in 1881; vein a fissure six feet wide, pay streak from six to twenty inches, containing quartz and galena, assaying from 30 to 400 ounces silver per ton; developed by a tunnel forty feet long.

**Evening Star.**—150x1500 feet; situated on Willow Creek, five miles from Frisco, Wilkinson district; located in 1878; owners John Proffitt, George Kirkland, and Herod Fulton, all Frisco; vein a fissure from six to eighteen inches wide, containing quartz and gray copper, assaying from five to ten per cent copper and from 25 to 500 ounces silver per ton; developments—one thirty-foot tunnel.

**Excelsior.**—150x1500 feet; situated on the east slope of Tucker Mountain, two and one-half miles from Kokomo, Ten-mile district; located in August, 1879; owners R. Morrison and W. H. Mitchell, both Kokomo; vein probably a fissure varying in width, and containing decomposed matter and lead carbonates, assaying from 50 to 100 ounces silver per ton; developed by one tunnel fifty feet long.

**Extenuate.**—(See X 10 U 8.)

**Fairview.**—(See Bellevue and Fairview.)

**Fairview.**—150x1500 feet; situated on the south slope of Sheep Mountain, one-quarter mile from Robinson, Ten-mile district; located in 1880; owners D. R. McNamara, Robinson, J. D. McCarthy, Leadville, Chas. H. Abbott, and others, Chaffee City; vein a contact six feet wide, containing decomposed matter and lead carbonates, assaying from twenty to fifty ounces silver per ton; developments—one eighteen-foot shaft and one sixty-eight-foot incline from bottom of shaft.

**Fannie.**—150x1500 feet; situated on the north-east slope of Collier Mountain, one mile from Chihuahua, Peru district; located in July, 1880; owner W. L. Mitchell, Chihuahua; vein a fissure thirty-two feet wide, containing quartz with bismuth, assaying fifteen ounces silver and a trace of gold per ton; developed by one tunnel fifty-eight feet long, and other workings.

**Fannie R.**—Owned by R. Redin Kirk, Breckenridge, J. A. Barrock and J. C. Conwell, both Montezuma; claim 1500x150 feet; situated on Collier Mountain, Snake River district, one mile from Montezuma; located in 1882; vein a fissure four feet wide, pay streak thirty inches, containing galena and quartz, assaying sixty per cent lead and from fifteen to thirty ounces silver per ton; developed by a shaft sixty feet deep.

**Fannie V. Candler Group.**—Owned by G. W. Kesler, Decatur, James Peck, Breckenridge, and others; group comprises the Fannie V. Candler,

Belle P., Canada, and Cold Spring lodes, 1500x150 feet each; situated on the west slope of Silver Mountain, Peru district, three-fourths mile from Decatur; located in July, 1881; veins all fissures from four to twenty feet in width, containing mineralized quartz, assaying fairly; developed by four shafts ten feet in depth each.

**Fanny Hill.**—Owned by John J. Evans, Farnum Station; claim 1500x150 feet; situated on the north slope of Bald Mountain, Bald Mountain district, seven miles south of Breckenridge; located in 1880; vein three feet wide, pay streak three inches, containing galena and carbonates, assaying two ounces silver and one ounce gold per ton; developed by a tunnel thirty feet long.

**Fanny Placer.**—Owned by Mrs. Kate McDonald, Breckenridge, and G. W. Smith, Philadelphia; claim covers twenty acres; situated in the channel of the Blue River, at Breckenridge; located in 1876; developed by seventy-two feet of fluming and several open cuts.

**Federal Silver Mining Company (The).**—Incorporated under the laws of Colorado, in March, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Hon. J. Warren Keifer, Springfield, Ohio; vice-president, J. F. Oglevee, Columbus, Ohio; treasurer, Asa Whitehead; secretary and general manager, C. C. Royce—both Washington, D. C.; office 510 F street, Washington, and at Frisco; owns sixteen claims, 150x1500 feet each, viz.: Bailey, Belford, Burrows, Keifer, Whitehead, Foote, B. F. Warren, Halderman, and Ikey W.; situated on the west slope of Keifer Mountain, five miles from Frisco, Ten-mile district; located from May to July, 1880, and Foote and B.F.Warren patented August, 1881, and the Bailey in process; veins all fissures from two to fifteen feet wide, pay streaks from four to fifty inches, containing quartz, galena, and iron pyrites, assaying from nothing to ten ounces gold and from 5 to 1,000 ounces silver per ton; developments—eight shafts from fifteen to thirty feet in depth and one cross-cut 125 feet long; and Belle Harter, situated at the head of Rock Creek, eighteen miles from Frisco, Wilkinson district, and located in October, 1881; vein a fissure twelve feet wide, containing four feet of quartz, galena, and copper, assaying ten per cent copper, thirty-five per cent lead, and from 5 to 250 ounces silver per ton; developments—one ten-foot shaft; and C. C. Royce, Foster Oglevee, Horace White, and Judson D., situated on Ikey Mountain, at head of South Rock Creek, sixteen miles from Frisco, Wilkinson district, and located in October, 1881; veins all fissures from five to ten feet wide, pay streaks from ten to thirty inches, containing galena and quartz, assaying twenty-five per cent lead and from 50 to 500 ounces silver per ton; developments—one ten-foot shaft on each claim.

**Feidt.**—Owned by J. D. Feidt, Chihuahua, and Rufus Lack, Georgetown; claim 150x1500 feet; situated on the crest of Irwin Peak, Peru district, four miles from Chihuahua, and located in August 1881; vein a fissure twenty feet wide, pay streak four inches, containing quartz, copper pyrites, and black oxide of copper, assaying fifteen per cent copper and from 25 to 495 ounces silver per ton; developed by a twelve-foot shaft, a ten-foot adit, and a ten-foot open cut.

**Felicia Grace.**—150x1500 feet; situated on the east slope of Sheep Mountain, at Robinson, Ten-mile district; located in August, 1879; owners Jno. A. Hall, Jr., H. M. and J. Woodford, W. M. Bickford, M. Warner, J. Doran, T. Murphy, J. B. Coster, Geo. McCloskey, and E. W. Etter, all Robinson, and Jno. C. Meagher, Leadville; vein contact forty inches wide, pay streak from fourteen to twenty-four inches, containing galena in a dolomite gangue, milling, when sorted, ten per cent lead and fifty ounces silver per ton; developed by 100 feet of shafting and fifty feet of adits and inclines; output fifteen tons, obtained within twenty feet of the surface, and the property is making regular shipments.



**Fifth of July.**—150x1500 feet; situated on the south slope of Cooper Mountain, one-fourth mile from Chihuahua, Peru district; located in July, 1879; owners Jos. B. Poulson, Chihuahua, and Antoine Libby, Georgetown; vein a fissure four feet wide, pay streak from six to ten inches, containing galena, iron pyrites, and quartz, milling, when sorted, fifty-five per cent lead and forty-five ounces silver per ton; developed by one cross-cut tunnel 230 feet long, a drift on the vein 170 feet long, and other workings.

**Fischer Gold and Silver Mining Company (The).**—Incorporated under the laws of the State of New York in 1880; capital stock $200,000, in 100,000 shares of $2 each, non-assessable; president and treasurer, Oliver L. Gardner; secretary, A. V. Marsh—both New York City; general manager, B. I. Hitchcock, Kokomo; offices 183 Canal street, New York, and at Kokomo; owns six claims, viz.: Boston, Chicago, Philadelphia, New York, Pittsburgh, and Alexander, covering thirty acres; situated at the head of Mayflower Gulch, and on the north-west slope of Fletcher Mountain, Ten-mile district, four and one-half miles from Kokomo; located from 1877 to 1879; veins all contacts from three to twelve feet in width, pay streak from one to eight feet, containing galena and carbonates in a sandstone and dolomite gangue, milling, when sorted, forty-five and one-half per cent lead, one-fourth ounce gold, and eight and one-half ounces silver per ton; developed by a shaft 206 feet deep, an incline 215 feet long, eighty-five feet of drifting, and other workings; improvements—steam machinery, motive power supplied by a twelve-horse-power engine, ore-houses, shaft-house, etc.; daily shipments from five to ten tons.

**Flag-staff.**—150x1500 feet; situated on the south slope of Cooper Mountain, one mile from Chihuahua, Peru district; located in August, 1879; owner D. L. Clancey, Chihuahua; vein a fissure four feet wide, pay streak from three to six inches, containing galena, sulphurets, and quartz, assaying thirty per cent lead and 100 ounces silver per ton; developed by three shafts thirteen feet deep each.

**Fletcher.**—(See A. V. Fletcher and Centre Group.)

**Fletcher.**—Owned by H. C. Kennedy, W. M. Wentworth, and J. B. Lovell, all Kokomo; claim 1500x150 feet; situated on Fletcher Mountain, Ten-mile district, and located in 1881, and in process of patent; vein a fissure three feet wide, pay streak from six to twenty inches, containing quartz and galena, with some gold, assaying from $30 to $60 per ton; developed by an incline thirty feet long and a shaft twenty feet deep.

**Flint Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, J. Gill, New York City; secretary, A. B. Baird; treasurer, George K. Kimball; superintendent, Samuel Flint—all Golden; office Golden, Colo., and Breckenridge; owns the following claims: Olive, Hill-side, and Snow-flake, 1500x150 feet each; situated on the Galena Gulch, or north-west slope of Flint Hill, Joe Davis district, six miles north-east of Breckenridge, and located in 1880 and 1881; veins all gashes from two to five feet in width, pay streaks about twelve inches, containing galena in a porphyry gangue, milling, when sorted, from $60 to $120 per ton; developed by two tunnels 90 and 185 feet in length, and other workings.

**Florence.**—150x1500 feet; situated on the east slope of Glacier Mountain, one and a fourth miles from Montezuma, Snake River district, and located in June, 1880; owner J. F. Willis, Montezuma; vein a fissure ten feet wide, pay streak three inches, containing galena, gray copper, and quartz, milling, when sorted, 250 ounces silver per ton; developed by one ninety-foot cross-cut, cutting the vein at a depth of sixty-five feet, and other workings.

**Florence.**—150x1500 feet; situated on the north-west slope of Gibson Hill, two and a half miles from Breckenridge, McKay district, and located in January, 1881; owner W. H. Watson, Breckenridge; vein a fissure two feet wide, pay streak from one to two inches, containing galena, assaying fifty-five per cent lead and thirty-five ounces silver per ton; developed by one twenty-five-foot shaft.

**Fontonelle and Monticello.**—Two claims, 150x1500 feet each; situated on the west slope of Gibson Hill, one and a half miles from Breckenridge, and located in April, 1880; owners R. M. Fanning and F. C. Marsh, both Breckenridge; vein a contact three feet thick, containing sulphurets and porphyry, assaying $35 per ton; developed by three tunnels, twenty, sixty, and thirty feet long.

**Forest and Erie F.**—Owned by E. F. Eisenhaur, Kokomo; claim covers nine acres; situated on the south-east slope of Jacque Mountain, Ten-mile district, and located March 28, 1882; vein a contact from three to five feet thick, containing sandstone and galena, yielding fairly; developed by a tunnel 210 feet in length and other workings.

**Forest and Silver Key.**—Two claims, 150x1500 feet each; situated on the north-east slope of Bear Mountain, eight miles from Breckenridge, McBarnes district; located in January, 1881; owners J. B. Sisty, Denver, W. V. and Frank Clark and Edward Gooding, all Breckenridge; vein in the former a contact, containing copper carbonates, copper glance, gray copper, and porphyry, assaying forty ounces silver per ton, and in the latter a fissure eight feet wide, containing crystallized lime and copper carbonates; developments—four shafts, forty, ten, twenty-two, and thirty-two feet deep, with a ten-foot drift from the bottom of the last.

**Forest City and May Belle.**—Owned by G. H. Lane, Decatur; claims 1500x150 feet; situated on the north-east slope of Silver Mountain, Peru district, at Decatur; located in December, 1880; vein a fissure from four to five feet wide, pay streaks from six to eight inches, containing iron pyrites, yellow and gray copper, galena, and quartz, assaying 150 ounces silver per ton; developed by a tunnel 100 feet long and a shaft twenty feet deep.

**Forest Queen Group.**—Owned by Albert Abbott and Geo. Rumbold, both Kokomo; group comprises the Forest Queen, Bobtail, and Little John lodes, 1500x150 feet each; situated on the west slope of Elk Mountain, Ten-mile district; located in 1881; veins all contacts from one and one-half to three feet in thickness, containing lead carbonates, galena, and some sandstone, assaying from twenty-five to fifty per cent lead and from twenty-three to sixty-seven ounces silver per ton; developed by two shafts ten feet deep each and a tunnel seventy feet long.

**Fortuna and Falsetto.**—Owned by J. C. Wiggenton, W. M. Bickford, A. W. Etter, Henry Nuckols, J. M. Woodford, and H. M. Woodford, all Robinson, and J. L. Lisle and J. A. Stevenson, both Kentucky; claims 1500 x150 feet each; situated on the south slope of Sheep Mountain, Ten-mile district, one-half mile from Robinson; located in 1879; veins all contacts from two to six feet in width, pay streaks from five to ten inches, containing sandstone and galena, assaying ten per cent lead and eighty ounces silver per ton; developed by a shaft eighty feet deep and a fourteen-foot incline.



**Fortune and Rebel.**—Owned by Smith P. Brown, D. C. Bitner, and J. M. Peck, all Leadville; claims 1500x150 feet each; situated on Bartlett Mountain, Ten-mile district, three and one-half miles from Robinson; located in 1881, and in process of patent; vein a contact three feet wide, containing sandstone with galena and copper, assaying thirty per cent lead and fifteen ounces silver per ton; developed by two shafts thirty and thirty-five feet in depth.

**Fox Lake and Ira Roberts.**—Owned by W. S. Germain & Co., Breckenridge; claims 1500x150 feet each; situated on the west slope of Gibson Hill, one and one-fourth miles from Breckenridge; located in 1880; vein a contact three feet wide, containing gray copper and sulphurets in a porphyry gangue, milling, when sorted, ten per cent copper and forty ounces silver per ton; developed by two tunnels 112 and 165 feet in length and other workings.

**Fox River Mining Company (The).**—Incorporated under the laws of Illinois, December, 1880; capital stock of $100,000, in 10,000 shares of $10 each, non-assessable; president, C. L. Young; secretary, Theo. Gribi; treasurer, Geo. S. Chisholm; general manager, G. S. Colman—all Elgin, Ill.; offices Elgin and Breckenridge; owns five claims, viz.: C. L. Young, C. L. Young Extension, North Star, Lady Elgin, and Iron, 1500x150 feet each; situated on the west slope of Bald Mountain, Bald Mountain district, six miles from Breckenridge; located in June, 1880; veins all fissures from two to seven feet in width, pay streaks from ten to thirty inches, and in the C. L. Young thirty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, from 50 to 250 ounces silver per ton; developed by four open cuts from thirty to forty feet in length and a tunnel 105 feet long.

**Franklin.**—(See Dubuque and Breckenridge Mining Company.)

**Fredonia.**—(See Connecticut and Illinois Mining Company.)

**Free American Mining Company (The).**—Incorporated under the laws of Colorado, in February, 1883; capital stock $100,000, in 2,000 shares of $50 each, non-assessable; president, Calvin De Wolf; vice-president, Miles G. Kellogg; secretary and treasurer, Wallace De Wolf—all Chicago; superintendent, S. D. Kneeland, Kokomo; offices 184 Dearborn street, Chicago, and Recen; owns the Free America lode, covering three acres; situated on the south-west slope of Jacque Mountain, one-fourth mile from Kokomo, Ten-mile district; located in February, 1881, and patented; vein a contact from five to fifteen feet thick, containing galena in a sandstone and lime gangue, milling, when sorted, fifty per cent lead and fifteen ounces silver per ton; developed by a tunnel 100 feet long, a drift on the vein from the tunnel fifty feet long, an incline from the tunnel 106 feet long, and other workings; improvements—shaft and ore house.

**French.**—Owned by Henry Rock, Michelle Magger, and Mague Dagenai, all Recen; claim 1500x150 feet; situated on the south-west slope of Fletcher Mountain, six miles from Recen, and six miles from Breckenridge, Ten-mile district; located in July, 1882; vein a fissure four feet wide, pay streak from six to twenty-four inches, containing galena and gold quartz, assaying fifty per cent lead, $2 in gold, and twenty ounces silver per ton; developed by tunnel fifteen feet long and a ten-foot shaft.

**Frenchman.**—150x1500 feet; situated on the north slope of Collier Mountain, one mile from Chihuahua, Peru district; located in September, 1880;

owners Kasper Hoeffel and Antoine Serre, both Chihuahua; vein a fissure seventy-five feet wide, pay streaks aggregating thirty inches in width, containing galena and quartz, assaying forty-five per cent lead and from twenty-five to fifty ounces silver per ton; developed by one drift eighty feet long, with a six-foot shaft from end of drift, and one sixteen-foot shaft.

**Friendship Group.**—Owned by W. W. Young, M. Wanner, and A. W. Etter, all Robinson; group comprises the Friendship, Eureka, and Little Emma lodes, 1500x150 feet each; situated on the west end of Chalk Mountain, Ten-mile district, three miles from Robinson; located in 1882; veins all contacts from three to twenty feet in width, containing sandstone and galena, assaying twenty-five ounces silver per ton; developed by a shaft forty-six feet deep and a twenty-eight-foot incline.

**Frisco Belle and Ten-mile Chief.**—Two claims, 150x1500 feet each; situated on the east slope of Chief Mountain, one mile from Frisco, Wilkinson district; located in September, 1879; owners Charles A. Finding, Breckenridge, F. S. Reardon, Frisco, David A. Gage, Denver, H. H. Allen, Wichita, Kansas, and C. F. Shedd, Fairfield, Nebraska; vein a fissure five feet wide, pay streak six inches, containing galena in a quartz gangue, milling, when sorted, forty per cent lead and forty-four ounces silver per ton; developments—two tunnels eighty-seven and thirty-seven feet long, and other workings.

**Frozen Lake.**—150x1500 feet; situated on the west slope of Argentine Mountain, three miles from Decatur, Peru district; located in July, 1879, and in process of patent; owners H. W. Eddy, Salem, D. T., and L. W. Aldrich, Montezuma; vein a fissure four feet wide, containing quartz and galena, assaying twenty-five per cent lead, some gold, and 100 ounces silver per ton; developed by one shaft twenty feet deep and one drift sixty feet long.

**Fugitive.**—Owned by George Puterbaugh, Breckenridge, Josiah Crotty, Peoria, Ill., and F. T. Hughes, Keokuk, Iowa; claim 1500x150 feet; situated on the north-west slope of Nigger Hill, two miles from Breckenridge, and patented in September, 1880; vein a horizontal contact, varying in width, and containing carbonates and decomposed matter, assaying seventy per cent lead and thirty-five ounces silver per ton; developed by three shafts, fifteen, twenty, and sixty feet in depth, and other workings.

**Fuller and Crome Placer.**—Owned by J. L. Fuller and F. Crome, both Breckenridge; claim covers 27,000 square feet; situated on the Blue River, Upper Blue district, near Breckenridge; developments—a flume 400 feet in length and some ditching, worked by ground sluicing; output probably $25,000.

**Galena Placer.**—700 acres; situated in Galena and Delaware Gulches, on the Swan River, seven miles from Breckenridge, Swan district, and located in 1860; owner J. D. Roby, Breckenridge; developments—two ditches from the Swan River, four and two and one-half miles in length, two movable flumes two feet wide and 150 and 200 feet long, worked by two No. 2 Hydraulic Giants.

**Gallagher.**—150x1500 feet; situated on the east slope of Carbonate Hill, three-fourths of a mile from Breckenridge, and located in May, 1881; owners John Gallagher and Thos. Temple, both Breckenridge; vein a vertical contact from one to two feet thick, containing quartz carrying gold and silver, assaying from $50 to $250 per ton; developed by one shaft fifty feet deep and one tunnel twenty-five feet long.



**Garfield.**—150x1500 feet; situated on the east slope of Sheep Mountain, one-half mile from Robinson, Ten-mile district; located in 1880; owners Hynes, David, and Chas. Gratton, all Kokomo, and S. Delamater, Chicago; vein probably a fissure ten inches wide, containing galena in quartz, milling, when sorted, sixteen ounces silver per ton; developed by one shaft 195 feet deep, and other workings.

**Garfield Group.**—Seven claims, 150x1500 feet each, viz., Garfield, No. 1, No. 2, and No. 3, Buena Vista, Chieftain, Justice, and Black Hawk; situated on the south-west slope of Gibson Hill, one mile from Breckenridge; the first three located in 1881, and the last four in 1879, and in process of patent; owner E. Nashold, Breckenridge; vein a fissure three feet wide, containing galena and gray copper in a porphyry gangue, milling, when sorted, $40 per ton; developed by three tunnels, 156, 86, and 96 feet long, two shafts forty-five feet deep each, and two cross-cuts 30 and 260 feet long, the latter designed to cut all the Garfield veins and the No. 1 at a depth of ninety feet.

**Garfield Mining and Tunnel Company (The).**—Incorporated under the laws of Colorado, December 26, 1882; capital stock $300,000, in 30,000 shares of $10 each, non-assessable; president and treasurer, David Allen; secretary, Wm. Knapp—both Denver; superintendent, J. J. Williams, Decatur; office Room 4 Evans' Block, Denver; owns three claims, 150x1500 feet each, viz., Excelsior, Aurora, and Grand View; situated on the Horseshoe Gulch slope of Argentine Mountain, two and one-half miles from Decatur, Peru district; located in July, 1881; veins all fissures from sixteen to twenty-four inches wide, containing quartz and galena, assaying from twenty to sixty ounces silver per ton; developments—three shafts twelve feet deep, one on each claim, and a thirty-foot tunnel on the Garfield Tunnel site, 3000x6 feet, also owned by the Company, and designed to cut the above described veins at depths, respectively, of 254, 688, and 980 feet.

**Gem City Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $1,500,000, in 30,000 shares of $50 each, non-assessable; president and general manager, Capt. M. Piggott; vice-president, Harry Swimmer; secretary, J. V. Henry; treasurer, J. L. Schrage—all Quincy, Ill.; financial agent, T. E. Clery, Montezuma; offices Quincy and Montezuma; owns the Monarch Group, five claims, 150x1500 feet each, viz., Monarch, J. V. Henry, Sunburnt, Evening Star, and J. V. G. Shurtleff; situated on the east slope of Glacier Mountain, one and one-fourth miles from Montezuma; located in 1881, and the first patented in 1881; veins all fissures about four feet wide each, pay streaks from three to fifteen inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead and from 50 to 100 ounces silver per ton; developed by two drifts sixty and twenty-five feet long, one cross-cut fifteen feet long, and a series of openings on the veins; and owns Wyoming, Montezuma, Minnie, J. L. Schrage, Wide West, May Henry, Harrison, Little Joe, and Denver, nine claims, 150x1500 feet each; situated on the north-east slope of Glacier Mountain, one-half mile from Montezuma, Snake River district; located in June, 1882, and previously, the Wyoming, Harrison, and Montezuma patented; veins all fissures from three to six feet wide, pay streaks from three to thirty-six inches, containing quartz and galena, assaying fifty-five per cent lead and from 25 to 250 ounces silver per ton; developments—on the Wyoming one eighty-foot drift and one thirty-five-foot shaft, on the Harrison one forty-foot drift and one sixteen-foot shaft, and on each of the others drifts from twenty to forty feet in length, besides openings on all the veins to prove them up.

**Gen. Grant and Pinafore.**—Owned by D. and W. L. Doncaster, both Kokomo, and J. Van Brocklin, Albany, N. Y.; claims 1500x150 feet each; situated on the east slope of Elk Mountain, Ten-mile district; located in 1879,

and in process of patent; veins all contacts varying in thickness, containing galena and carbonates in a sandstone gangue; developed by a tunnel 155 feet long and two shafts fifteen feet deep each.

**Genesee.**—150x1500 feet; situated on the north slope of Bear Mountain, one mile from Mentezuma, Snake River district, and located in August, 1881; owner George Fiedler, Montezuma; vein a fissure four feet wide, pay streak eighteen inches, containing quartz and brown sulphurets, assaying, at the grass roots, seventeen ounces silver per ton; developed by one forty-two-foot shaft.

**Gentry County.**—Owned by W. C. Maupin, Benjamin Kessler, and C. A. Miller, all Decatur; claim 1500x150 feet; situated on the south slope of Ruby Mountain, Peru district, one-fourth mile from Decatur, and located February, 1882; vein a fissure three and a half feet wide, pay streak ten inches, containing galena and green copper in a quartz gangue, milling, when sorted, five per cent copper, thirty-five per cent lead, and 212 ounces silver per ton; developed by adit thirty-two feet long and some other workings.

**Geo. Rust & Co.'s Reduction-works.**—Owners Geo. Rust & Co., Denver; manager, C. H. Dunbrack, Decatur; works established in 1883, and situated at Decatur; consitsing of main building (frame), 178x36 feet, and two stories high, containing ten Stamps (Fraser & Chalmers, makers), Bruckner Cylinders and Revolving Barrels, capacity one and a half tons each, or ten tons per day; motive power supplied by a forty-five-horse-power engine and ample boiler; ore-sheds, capacity 500 tons; office, laboratory, assay-room, boarding-house; the Brittle Silver Group (see Brittle Silver Group) is owned by the same parties.

**George Washington and Hancock.**—(See Washington and Hancock.)

**Georgetown.**—Owned by Henry Lopas and E. O. Wiers, both Breckenridge; claim 1500x150 feet; situated on Mineral Hill, Bevan district, two miles from Breckenridge, and located in 1880; vein a contact eight feet wide, seamed with galena, assaying fifty ounces silver per ton; developed by a shaft seventy feet in depth and other workings.

**Gibson Hill Mining Company (The).**—Incorporated under the laws of Colorado, Mar. 19, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, F. H. Odiorne, Boston; vice-president, C. C. Kellogg; secretary, G.W. Kellogg—both Leadville; treasurer, O.W. Pitcher, Belfast, Me.; manager, B. M. Newcomb, Breckenridge; owns twenty-three claims, 150x1500 feet each, viz.: Naperville, Blue River, Little Maud, Paris, Pine Grove, Princeton, Alliance, Shamokin, Eleanora, Elizabeth, Anna, Mary Anna, Ravenna, Quality Hill, Horn Silver, Free Gold, Bullion King, Bullion King Parallel, Stork, Makilda, Barbara, Little Thunder; situated on Gibson Hill, one and one-half miles from Breckenridge, and located in May and June, 1880, and in process of patent; veins all fissures from six inches to four feet wide, containing porphyry, galena, iron and lead carbonates, milling, when sorted, from forty to fifty-five per cent lead and from fifteen to thirty ounces silver per ton; developments—twenty-three shafts from twelve to seventy-five feet in depth, three tunnels, 175, 130, and 150 feet long, and 270 feet of drifting, and other workings; improvements—shaft and ore houses, and the property is making regular shipments.

**Gilpin Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $200,000, in 100,000 shares of $2 each, non-assessable; president and treasurer, Oliver L. Gardner; sec'y, A.V. Marsh—both New York; general manager, B. I. Hitchcock, Kokomo; offices 183 Canal street, New York, and at Kokomo; owns the Gilpin, Jimmie, and Johnnie lodes, 1500x150 feet each; situated at head of Mayflower Gulch, Ten-mile district, four and one-half miles from Kokomo, and located in 1879; veins all contacts from three to six feet in width, containing galena and carbonates in a sandstone gangue, milling, when sorted, thirty per cent lead, one-fourth ounce gold, and twenty ounces silver per ton; developed through the Fisher Gold and Silver Mining Company's workings.



**Gilroy.**—(See J. C. Gilroy and Little Rosedale.)

**Glacier Tunnel and Silver Mining Company (The).**—Incorporated under the laws of Colorado, April 22, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable and full paid; president, Jacob S. Merrell, St. Louis; vice-president and general manager, Chas. Preston, Montezuma; secretary, C. P. Walbridge; treasurer, C. W. Comfort—both St. Louis; assistant superintendent, L. S. Preston, Montezuma; principal office Montezuma, branch office 620 Washington Avenue, St. Louis; owns one tunnel site, 6x3000 feet; situated on the west slope of Glacier Mountain, one and three-quarters miles from Montezuma, Snake River district; located in October, 1881; on which a tunnel is driven 350 feet long; and owns six claims, 150x1500 feet each, crossing the tunnel site, the veins (all fissures) of which the tunnel is designed to cut, viz.: Arctic vein five feet wide (on which there is twenty-five feet of drifting from the tunnel), containing free-milling gold quartz and galena, assaying from $5 to $60 gold and from 4 to 300 ounces silver per ton; Lady Green vein five feet wide, pay streak fifteen inches, containing galena and quartz, assaying forty per cent lead, from a trace to an ounce gold, and twenty ounces silver per ton; Lady Green Extension (an extension of Lady Green, with similar characteristics); Estella J. vein varying in width, and containing mineralized quartz, assaying twenty ounces silver per ton; Estella J. Extension (an extension of Estella J., with similar characteristics); and Hidden Treasure Extension vein varying in width, and containing a fair material; all located from June, 1881, to February, 1882; and are otherwise developed by four open cuts from ten to fifteen feet in length, and three shafts from ten to twenty-five feet in depth. The tunnel will also cut several other known leads on the same slope of the mountain and any blind ones shown to exist in the progress of the work; another tunnel is started 500 feet below the one mentioned, designed to cut all the veins at much greater depth, the ores in these leads proving richer with increased depth; the work is being pushed vigorously.

**Glendale.**—(See Treasure Vault Mining Company.)

**Gold-dust.**—Owned by C. N. Holden, Chicago, and Edward Parker and West Lowe, both Frisco; claim 1500x150 feet (an extension of the Hopeful, with similar characteristics); developed by an assessment shaft.

**Gold King.**—150x1500 feet; situated on the north slope of Bowery Hill, two and one-half miles from Swan City, Swan district; located in January, 1882; owner Henry Jarchow, Swan City, and Aaron H. Cronkite, Oshkosh, Wis.; vein a fissure (with slate walls) ten feet wide of quartz, carrying gold, assaying from $15 to $35 per ton; developed by an open cut 150 feet long, one shaft twenty feet deep, and one drift from bottom of shaft twenty-six feet long.

**Gold King and Osceola.**—Owned by Daniel Vaughan, H. P. Mellen, and G. W. McBride, all Kokomo; claims 1500x150 feet each; situated on the east slope of Jacque Mountain, Ten-mile district, one and one-half miles from Kokomo; located in July, 1882; veins all contacts from two to four feet

thick, containing sandstone, galena, and sulphurets, assaying from ten to twenty-five ounces silver per ton; developed by a forty-foot shaft and a twenty-five-foot incline.

**Gold Pan.**—150x1500 feet; situated on the crest of Nigger Hill, three miles from Breckenridge; located in 1879; owned by F. P. and West Yingling, both Breckenridge; vein a fissure two feet wide, pay streak six inches of gold-bearing quartz, assaying $18 per ton; developed by one forty-five-foot shaft and one fifty-foot tunnel.

**Gold Rock.**—Owned by Geo. S. Clarkson, Leadville; claim 1500x 150 feet; situated on the Blue River slope of North Star Mountain, Pollock district, nine miles from Breckenridge; located in 1880; vein a fissure four feet wide; containing gold and silver quartz, milling, when sorted, $30 per ton; developed by an open cut 100 feet long, and other workings; output 200 tons.

**Gold Run and Buffalo Flats Placers.**—Owned by Leon Peabody, Hamilton, and G. W. Mumford, Breckenridge, C. H. Bellamy, Geo. H. Barrett, and C. R. Fish, all Georgetown; claims cover 800 acres (160 patented); situated in Gold Run Gulch, Union district, three and one-half miles from Breckenridge; located in 1860; developed by three ditches, four, four and one-half, and nine inches in length, 600 feet of flumes, and other workings.

**Golden Chief.**—150x1500 feet; situated on the south-east slope of Humbug Hill, one mile from Lincoln, Avalanche district; located in January, 1882; owners J. D. Boyes, Lincoln, and Frank E. Cooper, Breckenridge; vein a vertical contact (porphyry and lime walls), six feet wide of quartz carrying gold, and assaying fairly; developments—one twenty-foot shaft.

**Golden Chord Group.**—Owned by Nelson Andrew and Michael Gagan, both Kokomo, A. Mayfield, B. P. Andrew, and F. S. Selly, all Lincoln, Ill., A. Merriam and D. T. Littler, both Springfield, Ill., J. H. Hoblett, Atlantic, Ill., and David Kerr, Bloomington, Ill.; group comprises the Golden Chord, Home-stake, Black Tail, Dark Ages, Orphan Boy Nos. 1 and 2, Present Help, Pilgrim's Progress, and Grand View, 1500x150 feet each; situated on the west slope of Fletcher Mountain, Ten-mile district, four and one-half miles from Kokomo; located in 1879, and partially patented; veins all fissures from four to twenty feet in width, containing gold and silver quartz, milling, when sorted, twenty per cent lead, from 50 to 150 ounces silver, and from one to eight ounces gold per ton; developed by four tunnels from ten to fifty-five feet in length, sixteen open cuts from twelve to twenty-five feet in length, and other workings.

**Golden Edge.**—(See Triangle and Golden Edge.)

**Golden Queen Group.**—Five claims, 150x1500 feet each, viz., Golden Queen, Arabic, Central, Bijou, and Juliana; situated on the south-east slope of Jacque Mountain, one mile from Kokomo, Ten-mile district; located in 1878 and 1879, and patented in 1882; owners W. R. Thompson, S. L. Morris, Jno. Leuckel, and B. F. Follett, all Kokomo; veins all fissures about thirty inches wide, containing sandstone and carbonates, assaying 100 ounces silver per ton; developed by five shafts from eleven to fifty feet in depth and one tunnel 325 feet long.

**Gold-dust Placer.**—(See Raven and Gold-dust Placer.)

**Goodier and Roman.**—Two claims, 150x1500 feet each; situated on the north-east slope of Nigger Hill, four miles from Breckenridge, and located in June, 1880; owners A. H. Solomon, Wm. Egan, and S. Winslow, all Breckenridge; vein a fissure forty inches wide, pay streak from ten to sixteen inches of gold-bearing porphyry, assaying three ounces silver and $35 in gold per ton; developed by one sixty-five-foot shaft, one twenty-seven-foot incline, and one twenty-foot drift.



**Governor Group.**—Three claims, 150x1500 feet each, viz., Pilot, Governor, and Pointer; situated on the Blue River slope of Mount Quandary, seven miles from Breckenridge, Pollock district; located in 1880 and 1881, and patented in 1882; owners James W. Kennedy, Breckenridge, J. G. Bedford, Leadville, Geo. W. Crow, Henry P. Long, J. J. Armstrong, Frank Pitts, Dr. R. G. Dysart, and others, Paris, Mo.; veins all contacts from ten to thirty feet in width, pay streaks from ten to forty inches, containing galena, with some wire and native silver, in a quartz gangue, milling, when sorted, from ten to twenty per cent lead, the first-class ore from 100 to 150 ounces and the second-class from ten to forty ounces silver per ton; developments—three cross-cut tunnels, 70, 200, and 275 feet long, an upraise from the first to the surface forty feet high, forty feet of drifting on the vein at the end of the second and the last, cutting veins on the two first claims at depth of 200 feet (the veins ten and twenty feet wide, respectively), on which there is 120 feet of drifting, an upraise to the upper workings 120 feet high, and two shafts 105 and 60 feet deep, with a twenty-foot drift from the bottom of the former—adjoining which property is a five-acre mill site, on which it is the intention of the owners to erect a thirty-ton concentrator for the treatment of their low-grade ores.

**Gov. Tabor.**—150x1500 feet; situated on the north slope of Humbug Hill, two miles from Lincoln City, Avalanche district, and located in January, 1882; owners J. W. Allen, Geo. A. Blanchard, W. W. Moore, and Chas. H. McCormick, all Lincoln City; vein a fissure twenty-six inches wide of gold and silver bearing quartz, milling fairly; developed by two shafts twenty-seven and ten feet deep.

**Gracie B.**—150x1500 feet; situated on the west slope of Gibson Hill, one and one-half miles from Breckenridge, and located in July, 1882; owners Wm. Rand and P. D. Mickel, both Breckenridge; vein a contact six feet thick, containing decomposed matter, lead and iron carbonates; developed by one sixty-foot incline.

**Grand Trunk.**—Owned by Edwin Sheppard, Kokomo; claim 1500x 150 feet; situated on Jacque Mountain, Ten-mile district, one and one-fourth miles from Kokomo, and located in 1880; vein a contact four feet thick, containing sandstone and galena; developed by a tunnel forty feet long.

**Grand View Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; capital stock $600,000, in 60,000 shares of $10 each, non-assessable; president, Chas. R. Fish; vice-president, W. H. Spruance—both Georgetown; secretary and treasurer, M. Hyman, Leadville; general manager, P. F. Hook, Kokomo; offices Leadville and Kokomo; owns the Grand View, Hook, Hyman, and Pickwick lodes, 1500x150 feet each; situated on Gold Hill, Ten-mile district, one and one-half miles from Kokomo; located in 1879, and patented; veins all contacts from three to six feet in width, pay streaks from four to eighteen inches, containing galena, carbonates, and sand stone, assaying forty per cent lead, two and one-half ounces gold, and twenty ounces silver per ton; developed by six shafts from 20 to 125 feet in depth, a tunnel 660 feet long, and other workings.

**Grand View Group.**—Fifteen claims, 150x1500 feet each, viz.: Grand View, No. 1, No. 2, and No. 3, Dell W., Lizzie G., Atlantic City, Nora F., Sylvan, Fannie C., Belle S., Jane W., Frank L., Harry S., Eugene O., Will

W., and St. John; situated on the south-west slope of Gibson Hill, one and one-half miles from Breckenridge; located from May to September, 1882, and in process of patent; owners H. G. Sayles, Eugene Owens, W. H. Woodside, and F. L. Cox, all Breckenridge; veins all vertical contacts (lime and porphyry walls) from two to six feet wide, pay streaks from five to twenty-four inches, containing carbonized lead and iron and porphyry, assaying from twenty to forty per cent lead, two-tenths ounce gold, and from twenty to thirty ounces silver per ton; developments—fifteen shafts, one on each claim, from twenty to sixty-five feet in depth, a thirty-five-foot cross-cut, designed to cut the first three veins, the first at a depth of ninety-five feet, and a wagon road to the property.

**Grand View Group.**—Owned by W. C. and Martin V. Tompkins, both Robinson; group comprises the Grand View, Mattie, and Morning Star lodes, covering twelve acres; situated on Chalk Mountain, Ten-mile district, two miles from Robinson; located in 1878 and 1881; veins all contacts from one to four feet thick, containing galena in a sandstone gangue, milling, when sorted, forty ounces silver per ton; developed by a tunnel 104 feet long and two shafts ten and twenty-three feet in depth.

**Grand View and Robert Emmet.**—Owned by Michael Shea, Jeremiah O'Neil, James Lowney, and Michael Smith, all Leadville; claims 1500x150 feet each; situated on Sheep Mountain, Ten-mile district, one mile from Robinson; located in 1880; veins all contacts from two to four feet in thickness, containing sandstone and galena, assaying sixty ounces silver per ton; developed by two shafts twenty and seventy-five feet in depth.

**Grantham.**—(See Jason and Grantham Group.)

**Graphic Consolidated Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, E. McArther, Milwaukee, Wis.; secretary and treasurer, S. D. Hayward, St. Paul, Minn.; office St. Paul, Minn.; owns the Crown Point, Crown Point Tunnel, Princeton, Savage, and Belcher lodes, 1500x150 feet each; situated on the south slope of Sheep Mountain, Ten-mile district, one-half mile from Robinson; located in 1878; veins all contacts from one to two feet in thickness, containing galena in a sandstone and dolomite gangue, yielding fairly; developed by a tunnel 250 feet long and other workings.

**Great Northern.**—(An extension of Rose of Breckenridge); owned by A. G. Hoops, Breckenridge; claim 1500x150 feet; situated on the south slope of Mineral Hill, three miles from Breckenridge; located in 1878, and patented in October, 1882; vein a fissure four feet wide, pay streak from ten to sixteen inches, containing galena, and iron porphyry, assaying forty per cent lead and twenty ounces silver per ton; developed by two shafts forty-eight and sixty feet in depth.

**Great Western and Fire-fly.**—Two claims, 150x1500 feet each; situated on the south slope of Nigger Hill, two and a half miles from Breckenridge, and located in March, 1880; owners John Q. Wright, New York City, Henry Dennison, Elizabeth, New Jersey, and Wm. Johns, Swan City; vein a vertical contact six feet wide, pay streak from three to seven inches, containing carbonates of lead and iron, assaying fifteen per cent lead and from five to thirty ounces silver per ton; developed by two shafts eighty and thirty-five feet deep.

**Green Meadow.**—Owned by W. C. Tompkins, Robinson, and J. H. Smith, Leadville; claim 1500x150 feet; situated on Sheep Mountain, Ten-mile district, one mile from Robinson, and located in 1878; vein a contact three feet thick, containing sandstone and galena, assaying forty ounces silver per ton; developed by four shafts from 40 to 150 feet in depth and other workings.



**Green Mountain Boy and Richard Paul.**—Owned by Thomas Cunningham, John C. Woodbury, Richard Curran, and Peter Flynn, all Decatur; claims 1500x150 feet each; situated on the south slope of Argentine Mountain, Peru district, three miles from Decatur, and located in 1882; veins all fissures two feet in width, pay streaks from six to twelve inches, containing galena in a quartz gangue; developed by a twelve-foot shaft and a twelve-foot tunnel.

**Green Mountain Girl Group.**—Four claims, 150x1500 feet each, viz., Green Mountain Girl, Lone Star, Little Lottie, and Mammoth; situated on the west slope of Keifer Mountain, five miles from Frisco, Ten-mile district, and located in 1880; owners Jas. B. Belford, Denver, C. C. Warren, Warren's Station (Heywood P. O.), Aaron Sheldon and A. C. Graff, both Frisco; veins all fissures from two to ten feet wide, pay streaks from four to thirty inches, containing galena and quartz, assaying thirty per cent lead and from twenty-five to fifty ounces silver; and one small mill-run of sorted ore from the first named claim showed $90 per ton; developed by four tunnels from ten to twenty-five feet in length.

**Green Wave.**—150x1500 feet; situated on the top of Sheep Mountain, three-fourths mile from Robinson, Ten-mile district, and located in 1879; owners Jno. A. Hall, Jr., Robinson, Jno. Sinnott, J. F. Humphreys, J. C. Ritchie, Jno. Swezy, Jr., W. Holliday, H. Bowman, J. C. Carney, and ——— Howard, all Leadville; vein probably a fissure, fourteen inches wide, containing galena in a sandstone gangue, yielding fairly; developments—one fifty-foot shaft and one twenty-foot drift.

**Greenwood.**—Owned by Jno. M. Mairs and Robt. W. Foote, both Breckenridge, and B. D. Spencer, Denver; claim 1500x150 feet; situated on the crest of Mineral Hill, four miles from Breckenridge, and located in May, 1880; vein a fissure varying in width, pay streak twelve inches, containing galena in a porphyry gangue, milling, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developed by a shaft twenty-five feet in depth and other workings; output fifteen tons.

**Greer Smelter.**—Owned by Thos. H. Greer, Robinson; building 44x60 feet, and two stories high, containing Blake Crusher, two Blowers, two Furnaces and Sampler; capacity ninety tons per day; three ore-houses, capacity 1,100 tons; ore-bins, capacity 150 tons; office, counting-room, and labratory; engine-room, containing sixty-horse-power engine and boiler; established in 1881, and situated at Kokomo.

**Grenadier Tunnel.**—Owned by Wm. Tracy, Kasper Hoeffel, and others, Chihuahua; site 3000x6 feet; situated on the south slope of Lenawee Mountain, four miles from Chihuahua, Snake River district; located in July, 1881; on which a tunnel is driven seventy-five feet long, cutting two mineral-bearing veins, on each of which a claim 150x1500 feet is located; first, Privateer, vein three feet wide, pay streak from one to two inches, containing quartz and galena, assaying forty per cent lead and from 100 to 150 ounces silver per ton; second, Grenadier, vein four feet wide, pay streak three inches, containing quartz and galena, assaying fifty per cent lead and 100 ounces silver per ton. There is a drift from the tunnel fifty feet long on the Privateer.

**Gray Eagle.**—Owned by Fred. Schaeffer, Lewis King, R. W. Officer, and A. Leigh, all Breckenridge; claim 1500x150 feet; situated on Bald

Mountain, seven miles south-east of Breckenridge; located in 1881; vein a fissure five feet wide, pay streak five inches, containing galena in a quartz gangue, milling, when sorted, ninety-six ounces silver per ton; developments—a tunnel seventy-five feet long, a shaft thirty feet deep, and other workings; output four tons per day.

**Gray Eagle, Broadside, and Empire State.**—Three claims, 150x1500 feet each; situated on the south slope of Buffalo Spur, six miles from Frisco, Wilkinson district; located in August, 1880; owner A. W. Folts, Warren's Station (Heywood P. O.); veins all fissures, five feet wide each, pay streaks from eighteen to thirty inches, containing galena, gray copper, and quartz, assaying seventy ounces silver per ton; developed by two tunnels fifty-two and sixty feet long, and two ten-foot shafts.

**Gray Eagle Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; office Leadville; owns the Gray Eagle Group, seven claims, covering about twenty-five acres; situated on Sheep Mountain, a little above the Robinson mine, Ten-mile district, one-half mile from Robinson; located in 1877, and patented in 1882; veins all contacts from two to four feet thick, containing galena in a sandstone and dolomite gangue, milling, when sorted, from 50 to 100 ounces silver per ton; developed by a shaft 135 feet deep, an incline 240 feet long, and other workings; improvements—steam machinery, motive power supplied by a twelve-horse-power engine, ore-houses, shaft-houses, etc.

**Gray Horse Group.**—Comprising the Gray Horse, Robert E. Lee, Plymouth, and Great Eastern lodes; owned by Allen P. Richardson, Breckenridge, Samuel A. Richardson, Gallatin, Mo., and Relief Jackson, Lafayette, Ind.; claims 1500x150 feet; situated on the apex of Mineral Hill, three miles from Breckenridge; located in April, 1880, and Gray Horse in process of patent; veins all fissures, in the Gray Horse (the principal claim) four feet wide, pay streak from ten to eighteen inches, containing galena and gold quartz, assaying forty per cent lead and from forty to fifty ounces silver per ton; Gray Horse developed by a forty-seven-foot shaft and the others by shafts from fifteen to twenty-five feet in depth; improvements—shaft-house and other buildings.

**Grizzly.**—Owned by Geo. W. Kesler, H. J. Domedion, Jos. Brummer, and T. J. Laney, all Decatur; claim 1500x150 feet; situated on the south slope of Cooper Mountain, Peru district, one-half mile from Decatur; located in 1880; vein a fissure two and one-half feet wide, pay streak four inches, containing galena and quartz, assaying fairly; developed by a ten-foot shaft and two drifts twenty-three and thirty feet in length.

**Grub-stake and Belle of Tennessee.**—Two claims, covering eight acres; situated on the west slope of Gibson Hill, one mile from Breckenridge; located in April, 1882; owners R. M. Fanning, R. M. Staley, and Joseph Finnegan, all Breckenridge; vein a blanket three feet thick, containing iron and copper pyrites, sulphurets, and porphyry, assaying $25 per ton; developed by two tunnels 130 and 38 feet long, and other workings.

**Guy and Elsa.**—Two claims, 150x1500 feet each; situated on the east slope of Jacque Mountain, one and one-half miles from Recen, Ten-mile district; located in February, 1882; owners C. H. McCoy and Geo. W. Quackenbush, both Kokomo; ore body probably a deposit, from ten to twelve inches thick, containing lead carbonates and decomposed matter, milling, when sorted, thirty ounces silver per ton; developed by one tunnel 115 feet long, and other workings.

**H. A. W. Tabor.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district; located in May, 1881; owners Archie



McDonald, Jr., Alma, and W. W. Bredin, M. D., Leadville; vein a fissure from three to four feet wide, pay streak three inches, containing a telluride quartz, carrying both gold and silver, assaying from $35 to $90 per ton; developments—one thirty-foot tunnel.

**Hail-storm.**—150x1500 feet; situated on the north slope of Red Peak, ten miles from Frisco, Wilkinson district; located in July, 1881; owners J. V. Brown, G. L. Gould, R. E. Sloan, H. M. McDill, Charles Hipp, and John Leadingham, all Frisco; vein a fissure from ten to twenty feet wide of quartz, carrying galena and copper, assaying from 10 to 100 ounces silver per ton; developments—one twenty-foot shaft.

**Hail-storm.**—Owned by J. S. Smith and Daniel Kehoe, both Quandary; 1500x150 feet; situated on the west slope of Fletcher Mountain, Pollock district, five miles from Quandary; located August 26, 1882; vein a fissure three feet wide, pay streak fifteen to twenty inches, containing galena and quartz, assaying from $50 to $100 per ton; developed by a twenty-foot open cut.

**Hamilton Development Company.**—(Unincorporated); trustee, John B. Cornell, Hamilton, O.; owns four claims, 150x1500 feet each, viz.: Big Bison, Slide, Silver Gem, and Small Hopes; situated on Teller Mountain, about four miles from Montezuma, Snake River district; veins all fissures, the first containing quartz and galena, and the three others quartz, galena, gray copper, and some bismuth, assaying from 20 to 100 ounces silver per ton; developments—four shafts, forty-two, thirty-five, fifteen, and twenty feet deep, one on each claim.

**Halo, Hades, Colfax, and Wild Goose.**—Four claims, 150x1500 feet each; situated on the west slope of Elk Mountain, six miles from Kokomo, Ten-mile district, and located in July, 1882; owners T. L. Davis, P. Erickson, and Overton Howard, all Kokomo; vein a contact eight feet thick, containing small streaks of carbonate ore, milling, when sorted, $15 per ton; developments—on the Halo one seventy-foot incline, one fifteen-foot winze, and one twenty-foot cross-cut, and on the others one ten-foot shaft each.

**Hammer and Breckenridge.**—Owned by A. A. Shaffer and Moses Ingram, both Breckenridge; claims 1500x150 feet each; situated on Bald Mountain, Bald Mountain district, five miles from Breckenridge, and located in 1879; veins both fissures from four to nine feet wide, pay streaks from three to ten inches, containing galena in a quartz gangue, milling, when sorted, from 50 to 100 ounces silver per ton; developed by an open cut thirty feet long and seventeen feet deep, a cross-cut tunnel seventy feet long, and two shafts ten and twenty feet in depth.

**Hancock.**—(See Washington and Hancock.)

**Hancock.**—150x1500 feet; situated on the west slope of Collier Mountain, at Montezuma, Snake River district, and located in November, 1881; owner T. R. Newman, Montezuma; vein a fissure three feet wide, containing eight inches of quartz streaked with galena, and assaying one ounce gold and forty-five ounces silver per ton; developed by one drift sixty feet long on the vein.

**Hancock.**—150x1500 feet; situated on the west slope of Silver Hill, two and one-half miles from Frisco, Ten-mile district, and located in February, 1881; owners H. S. Hay and E. J. Groff, both Frisco; vein a contact, varying in thickness, a twenty-foot shaft showing galena in the quartz, assaying twelve ounces silver and one-third ounce gold per ton.

**Hancock.**—150x1500 feet; situated on the west slope of Argentine Mountain, two miles from Decatur, Peru district, and located in 1880; owners W. A. Ritchie, Emil Gugoltz, and Geo. Guest, all Decatur; vein a fissure fourteen inches wide, containing pockets of black sulphuret ore, assaying from $50 to $500 per ton in gold and silver; developed by one tunnel thirty feet long.

**Hancock, Billy, and Z. B. Vance.**—Three claims, 150x1500 feet; situated on the north slope of Crystal Peak, four miles south-west of Breckenridge, Pollock district, and located in June, 1880; owners W. F. Hooper and M. E. Burns, both Breckenridge, and Jno. Abbott, Buena Vista; veins all fissures from two to twelve feet wide, containing copper-stained quartz and galena, assaying thirty per cent lead, some gold, and thirty-five ounces silver per ton; developed by three tunnels, forty-five, forty-five, and fifteen feet long, one on each claim.

**Hannibal.**—Owned by George Stroh and B. B. Lawrence, both Montezuma, and Abraham Dowdney, New York City; claim 1500x150 feet; situated on the south-west slope of Collier Mountain, Snake River district, one and one-half miles from Montezuma; located in January, 1880, and in process of patent; vein a fissure five feet wide, pay streak from six to twenty-eight inches, containing galena and copper carbonates in a quartz gangue, milling, when sorted, forty per cent lead and from ten to thirty ounces silver per ton; developed by a tunnel 330 feet long, three openings on the vein from ten to twelve feet in length, and other workings.

**Hard Times.**—Owned by Albert Vanatter and C. C. and R. F. Smith, all Breckenridge; claim 1500x150 feet; situated on the north side of Willow Creek, Wilkinson district, eight miles from Frisco, and located August 23, 1881; vein a fissure four feet wide, pay streak five inches, containing quartz, galena, and copper carbonates, assaying from 50 to 150 ounces silver per ton; developed by a ten-foot-face open cut.

**Hattie May.**—Situated on Sheep Mountain, three-quarters mile from Robinson, Ten-mile district, and located in 1879; owners Warren Woods, Morrison, Ills., J. Freer, Warren, O., and W. C. Tucker, Kokomo; vein a contact varying in thickness, and containing sandstone, galena, and lead carbonates; developments—three shafts from ten to twenty-five feet in depth.

**Haverhill.**—(Extension of Erickson); 150x1500 feet; situated on the crest of Keystone Mountain, three and one-half miles from Montezuma, Snake River district, and located in August, 1880; owners L. H. Flanders, Denver, and Robert McGuire, Montezuma; vein a fissure eight feet wide, pay streak from ten to twenty inches, containing quartz and galena, assaying fairly; developed by one shaft thirty feet deep.

**Hector.**—150x1500 feet; situated on the north slope of Independence Mountain, four miles from Montezuma, Peru district, and located in July, 1880; owner W. L. Mitchell, Chihuahua; vein a fissure six feet wide, containing mineralized quartz, assaying at grass roots five ounces silver and one-half ounce gold per ton; developed by two shafts ten and twelve feet deep.

**Helen.**—Owned by Solomon Barrett and George McAdams, both Montezuma; claim 1500x150 feet; situated on the north-west slope of Independence Mountain, Snake River district, two and one-half miles from Montezuma, and located June 4, 1879; vein a fissure seven feet wide, pay streak from four to twelve inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty-five per cent lead and seventy-five ounces silver per ton; developed by two tunnels thirty-five and forty feet in length, both in mineral.



**Helen B.**—150x1500 feet; situated on the surface ground of the Pittsburgh placer; located in 1881; owners A. H. Berriman and others, Breckenridge; vein a contact five feet wide, containing mineralized quartz and galena, assaying fairly; developments consisting of assessment work.

**Helen Group.**—Four claims, 150x1500 feet each, viz., Helen, Helen No. 1, Helen's Baby, and Hopeful; situated on the north slope of Nigger Hill, at mouth of Australia Gulch, one mile west of Lincoln City; two first located in 1864, and the two last in 1878; owners J. J. Riethman, Denver, and Calvin P. Clark, Lincoln; veins all fissures, from five to twenty-five feet in width of quartz carrying gold and silver, assaying from $5 to $100 per ton; developed by four tunnels, 450, 200, 40, and 45 feet long, five shafts from ten to fifteen feet in depth, and other workings.

**Henry Clay.**—150x1500 feet; situated on the south slope of Eureka Mountain, six miles from Montezuma, Snake River district; located in February, 1882; owned by C. C. Warren and A. W. Folts, both Warren's Station (Heywood P. O.); vein a fissure, three feet wide of quartz carrying gold, assaying from $10 to $50 per ton; developed by an eighty-four-foot tunnel and a ten-foot shaft.

**Henry Ward Beecher.**—Owned by Geo. McCloskey, Niel McGonnigal, and John Connor, all Robinson; claim 1500x150 feet; situated on Sheep Mountain, Ten-mile district, at Robinson; located in 1879; vein a contact two feet thick, pay streak from four to eight inches, containing galena and sandstone, assaying thirty-seven ounces silver per ton; developed by two shafts 75 and 140 feet in depth, and other workings.

**Herman.**—Owned by Hon. Herman Silver, Fred. Z. Salomon, and Ed. C. Guibor, all Denver; 150x1500 feet; situated on the west slope of Glacier Mountain, three-fourths mile from Sts. John, and two miles from Montezuma, Snake River district; located in August, 1875, and patented in December, 1881; vein a fissure five feet wide, pay streak twenty inches, containing galena, gray copper, silver glance, and ruby silver, in a quartz gangue, milling, when sorted, eighteen per cent lead and from 75 to 200 ounces silver per ton; developed by seven openings on the vein ten feet deep each, two shafts forty feet deep each, with a seventeen-foot drift from the bottom of the lower, and one drift fifty-two feet long; output one ton per day; improvements—stone shaft-house, 18x42, and frame tunnel-house, 10x12 feet, etc.

**Hermit Group.**—Owned by Frank C. Graham and H. H. Pollock, both Kokomo, and Altman Schloss, Leadville; group comprises the Hermit, Little Jennie, and Mary A. lodes, covering fourteen acres; situated on Jacque Mountain, Ten-mile district, one and three-fourths miles from Kokomo; located in 1879; veins all contacts from three to eight feet thick, containing galena and sandstone, assaying twenty per cent lead and from 50 to 100 ounces silver per ton; developed by a tunnel 200 feet long, a shaft 145 feet deep, and other workings.

**Hewitt.**—150x1500 feet; situated on the south-east slope of Independence Mountain, two and one-half miles from Montezuma, Snake River district; located in January, 1882; owners I. B. Hewitt and Christian Smith, both Decatur; vein a fissure four feet wide, pay streak eight inches, containing galena and gray copper in quartz, milling, when sorted, forty per cent lead and seventy-five ounces silver per ton; developed by one tunnel fifty-eight feet long and other workings.

**Hidden Hand Group.**—Comprising the Hidden Hand, Trade Dollar, Reeder, and Golden Gate lodes; owned by Samuel S. Lesher and R. L.

Nute, both Breckenridge, and Howard J. and Frank Reeder, James J. Cope, A. D. Chidsey, Charles B. Hetrick, and William Hackett, Jr., all Easton, Pa.; claims 1500x150 feet each; situated on the north-east slope of Bald Mountain, Bald Mountain district; located in May, 1880; veins all fissures, varying in width, and containing porphyry, gray copper, and iron pyrites, assaying from 25 to 5,000 ounces silver per ton; developed by four shafts from twenty to eighty-five feet in depth and other workings.

**Hidden Treasure and James.**—Owned by James Weeks and John Galiger, both Breckenridge; claims 1500x150 feet each; situated on Williams Hill, Swan district, six miles from Breckenridge, and located in 1880; vein a contact eight feet thick, containing gold quartz and silver sulphurets, assaying twenty-five ounces silver and four ounces gold per ton; developments—two shafts forty and eighty feet in depth and other workings.

**Hidden Treasure Group.**—Owned by M. O. Berg, H. A. Stiles, Ole Olson, Peter Armstrong, and Wm. F. Dunham, all Robinson; group comprises the Hidden Treasure, Alexis, and Calamity lodes, 1500x150 feet each; situated on the south-west slope of Sheep Mountain, Ten-mile district, one-half mile from Robinson, and located in 1881; veins all contacts from six to thirty-two inches in width, containing sandstone and galena, assaying nine per cent lead and twenty-eight ounces silver per ton; developed by three shafts from twenty to eighty-four feet in depth, two inclines, and a drift.

**Highland Mary.**—150x1500 feet; situated on the north-east slope of Wheeler Mountain, Ten-mile district, and located in July, 1882; owners Chas. A. Gordon and W. Q. Howarth, both Wheeler; vein a fissure five feet wide, containing free milling-quartz, carrying gold and silver, assaying eight ounces silver and four ounces gold per ton; developed by one tunnel twenty-five feet long and other workings.

**Highland Mary.**—150x1500 feet; situated at the head of Green Gulch and on the west slope of Gold Run Hill, one-half mile from Preston, Union district, and located in October, 1879; owners D. J. Thompson, Michael Reese, and Adam Hunter, all Preston; vein a fissure forty inches wide, containing pockets of iron pyrites, assaying $40 per ton in silver and gold; developed by one twenty-foot tunnel and one seventy-foot shaft.

**Highland Mary.**—Jos. Reeder, F. L. Bush, Samuel A. Jones, and Augustus Presnell, all Breckenridge, and F. M. Hardenbrook, Denver; claim covers four acres; situated on the south slope of Nigger Hill, two and one-fourth miles from Breckenridge, and located in 1880; vein a contact from six to eight feet wide, pay streak from ten to fourteen inches, containing lead carbonates in a porphyry gangue, milling, when sorted, fifty per cent lead and forty ounces silver per ton; developed by four shafts from fifteen to eighty feet in depth, a tunnel 140 feet long, and other workings.

**Hildebrand Tunnel Site.**—6x3000 feet; situated on the south-east slope of Gibson Hill, one and one-half miles from Breckenridge, Bevan district; owners the Goodrich Mining Company (unincorporated), consisting of C. B. Goodrich, Geo. I. Brinker, M. B. Corbin, and J. H. Porter, all Breckenridge; on which a tunnel is driven 370 feet long, cutting the veins in the Gray Copper and Crown Jewel, two claims, 150x1500 feet each, owned by the same company, and located in March and April, 1882; the former at a depth of 150 feet, on which there is sixteen feet of drifting and a sixteen-foot shaft, and the latter at a depth of 165 feet; veins both fissures seven and twenty-five feet wide, and containing a number of pay streaks from one to three inches wide of silver, sulphides, and copper glance, assaying from 100 to 750 ounces silver per ton and some gold.



**Hilton Mining and Milling Company (The).**—Incorporated under the laws of Colorado, March 15, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president and general manager, A. Shenker; vice-president, W. J. Hilton; secretary, L. P. Jackson; treasurer, Jesse M. Armstrong—all Hannibal, Mo.; offices Hannibal, Mo., and Argentine; owns eight claims, 150x1500 feet each, viz.: A. R. Coss, Equator Tunnel, J. E. Wannamaker, Big Dutchman, Little Emma, Bismarck, and Florence; situated on the north slope of Coss Hill, one-fourth mile from Argentine; located in 1879, and in process of patent, except the last three; veins all fissures from one to five feet wide, pay streaks from three to six inches, containing black sulphurets, antimonial silver, and some silver glance, in quartz, milling, when sorted, from 75 to 150 ounces silver per ton; developments—one shaft on each claim from ten to thirty feet in depth, and on the A. R. Coss one shaft 100 feet deep, with three drifts, thirty, thirty-five, and fifty feet long, and one tunnel 320 feet long.

**Hollister and Dunderberg.**—Owned by Thos. T. Eyre, Decatur; claims 1500x150 feet each; situated on the south slope of Ruby Mountain, at Decatur, Peru district; located in 1880; vein a fissure eight feet wide, pay streak from six to ten inches, containing quartz with galena and sulphurets, assaying, at grass roots, fifteen ounces, and at a depth of eighteen feet 150 ounces silver per ton; developed by a tunnel sixty feet long and a twelve-foot shaft.

**Home-stake.**—150x1500 feet; situated on the west slope of Keifer Mountain, three miles from Frisco, Ten-mile district; located in October, 1880; owners Ed. Parker and West Lowe, both Frisco, and C. N. Holden, Chicago; superintendent, Jesse M. Holden, Frisco; vein a fissure four feet wide, pay streak fourteen inches, containing galena and quartz, assaying fifty per cent lead and twenty ounces silver per ton; developed by one twenty-four-foot shaft and one eighty-five-foot cross cut tunnel, designed to cut the vein at great depth, and in the line of which is located a tunnel site, 3000x6 feet.

**Home-stake.**—150x1500 feet; situated on the south slope of Lenawee Mountain, one and one-half miles from Chihuahua, Peru district; located in July, 1879; owner D. L. Clancey; vein a fissure ten feet wide, pay streak from ten to twenty inches, containing galena, gray copper, and quartz, assaying twenty-five per cent lead and 100 ounces silver per ton; developed by one drift fifty-five feet long and four openings on the vein from ten to twenty feet in depth.

**Homestead.**—Owned by A. Pohl, Wm. Kennedy, and others, Robinson; claim 1500x150 feet; situated on the east slope of Sheep Mountain, Ten-mile district, at Robinson; located in September, 1881; vein a contact, varying in thickness, pay streak from six to fifteen inches, containing sandstone and galena, assaying from ten to fifty ounces silver per ton; developed by two shafts twenty and twenty-five feet in depth.

**Hong Kong.**—(Extension of Hunter); owned by George Puterbaugh, H. E. Lindsey, and C. L. and John Westerman, all Breckenridge, and Josiah Crotty, Peoria, Ill.; claim 1500x150 feet; situated on Donnellay Mountain, Upper Blue district, seven miles from Breckenridge, and located in 1881; vein a fissure five feet wide, seamed with gray copper, assaying fifty ounces silver per ton; developed by a tunnel sixty-five feet long and two shafts ten and six feet in depth.

**Hope.**—(See Newport Tunnel.)

**Hopeful.**—150x1500 feet; situated on the crest of Keifer Mountain, four miles from Frisco, Ten-mile district, and located in March, 1880;

owners John Cameron and Charles Morse, both Leadville, Colorado, Ed. Parker and West Lowe, both Frisco, and C. N. Holden, Chicago; superintendent, Jesse M. Holden, Frisco; vein a fissure four feet wide, pay streak nine inches, containing gold and silver bearing quartz, assaying from $100 to $150 per ton; developed by one forty-foot drift and one twenty-foot shaft.

**Horseshoe Mining Company.**—President, H. H. Warner, Rochester, New York; manager, Dr. Curran, Decatur; owns the "Nigger" property; situated on the Horseshoe slope of Argentine Mountain, about two miles from Decatur, Peru district; veins all fissures varying in width, and containing quartz, galena, and gray copper, milling, when sorted, from 25 to 100 ounces silver per ton; developments and improvements considerable.

**Houghton.**—150x1500 feet; situated on Sheep Mountain, at Robinson, Ten-mile district, and located in February, 1879, and in process of patent; owners S. J. Smith, Samuel Newhouse, and Sylvanus Ayres, Jr., all Leadville; vein a contact five feet thick, pay streak eighteen inches, containing lead carbonates in a sandstone gangue, milling, when sorted, thirty-two per cent lead and twenty ounces silver per ton; developments—one forty-foot shaft and one forty-eight-foot incline.

**Houlton Lady.**—(An extension of Arctic); owned by J. L. Welch, Johnson Taylor, and Israel White, all Alma; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, seven miles from Alma; located in June, 1881; vein a fissure, with a crevice eight feet wide, and a pay streak three feet, containing gold and silver quartz, assaying from $20 to $60 per ton; developed by an open cut forty feet long.

**Howard Group.**—Owned by Rudolph Wurlitzer, Cincinnati; agent, Wm. Crilly, Chihuahua; group comprises the Howard, Rudolph, Gerard, and Sylvia lodes, 1500x150 feet each; situated on the north slope of Cooper Mountain, Peru district, one mile from Chihuahua; patented in 1881; vein a fissure five feet wide, pay streak from four to ten inches, containing quartz, galena, and some copper, assaying from twenty to fifty ounces silver per ton; Howard developed by five shafts from ten to sixty feet in depth, and others by sixty feet of work; improvements—ore-house, shaft-houses, etc.

**Howard Taylor.**—(See Little Anna and Howard Taylor.)

**Humbug Placer.**—Twenty acres; situated in Humbug Gulch, three miles from Lincoln; located in 1865; owners Henry Stall and Henry Schuster, both Lincoln; developments—300 feet of ditching and two flumes forty and sixty feet long, worked by ground sluice.

**Hunkidori, Maria, and Grizzly.**—Three claims, 150x1500 feet each; situated on the south-east slope of Independence Mountain, two and one-quarter miles from Montezuma, Snake River district; located in 1880; owners Albert Penry, John T. Murphy, William Keough, and D. Dougherty, all Montezuma; veins all fissures, five feet wide in the first, pay streak twenty-two inches, containing galena and gray copper in a quartz gangue, milling, when sorted, 40 per cent lead and 157 ounces silver per ton; developed by one tunnel 400 feet long, with drifts and cross-cuts aggregating 128 feet in length, one level 128 feet long, and an open cut 100 feet long and 30 feet deep; in the Maria (an extension of the Hunkidori), same width and same character of ore, assaying 100 ounces silver per ton; and also a side vein ten inches wide, all mineral; developed by one tunnel sixty feet long and four openings on the vein; and in the Grizzly two feet wide of quartz and silver chlorides, assaying from 250 to 1,000 ounces silver per ton; developed by one shaft eighty-two feet deep and one tunnel forty feet long.



**Hunter.**—Owned by W. H. Grose and W. H. Treweek, both Alma and Moose Mining Company (see Park County); claim 1500x150 feet; situated in Hunter Gulch, Upper Blue district, seven miles from Breckenridge; located in October, 1868; vein a fissure from six to thirty-six inches wide, pay streak six to eighteen inches, containing galena, gray copper, and sulphurets, in a porphyry gangue, milling, when sorted, sixty ounces silver per ton; developed by a shaft 120 feet deep, with two drifts running therefrom thirty and fifty feet in length, a tunnel on the vein 150 feet long, and considerable stoping; improvements—whim-house, ore-house, boarding-house, etc.; output sixty tons shipped, averaging 200 ounces silver per ton.

**I X L Mining and Milling Company (The).**—Incorporated under the laws of Colorado in August, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Chas. H. Ulman; vice-president, Sydenham Mills; secretary, F. T. Baker; treasurer, A. J. Williams—all Denver; manager, W. W. Gelatt; superintendent, J. R. Holibaugh—both Swan City; office 284 Fifteenth street, Denver, and Swan City; owns five claims, 150x1500 feet each, viz.: I X L, Swallow, Royal Tiger, Highland Mary, and Eureka, and one five-acre mill site; situated on the north-west slope of Williams Hill, one-quarter mile south-east of Swan City, Swan district; located in April, 1880; vein a vertical fissure with porphyry walls ninety-one feet wide, with five distinct ore shoots from two to twelve feet wide, containing porphyry, galena, antimonial and bismuth silver, milling, when sorted, from 26 to 800 ounces silver per ton, the first-class ore yielding from 50 to 60 per cent lead, from 600 to 800 ounces silver, from 1 to 8 ounces gold, and the second-class from 30 to 40 per cent lead, from 40 to 200 ounces silver, from ½ to 3 ounces gold per ton; developed by five shafts from thirty to eighty feet in depth, one on each claim, and one cross-cut tunnel 500 feet in length starting on the Highland Mary, from which run eight drifts from thirty to eighty feet in length, all in mineral; and one tunnel 130 feet long, showing ore on all sides after the first eighty feet, and striking the I X L vein at a depth of 600 feet; improvements—ore-houses, shaft-houses, etc.; it is the intention of the Company to erect a concentrator for the treatment of the low-grade ores.

**Ida.**—(See Aggie and Ida.)

**Ida.**—(See Ada, Ida, and Rena.)

**Ida.**—(See McPherson and Ida.)

**Ida.**—150x1500 feet; situated on the west slope of Gold Run Hill, one-half mile from Preston, Union district; located in February, 1882; owners D. J. Thompson and Harvey Taylor, both Preston, and Wm. Allen, Breckenridge; vein a fissure eighteen inches wide, containing quartz, assaying $22 per ton in silver; developed by one twenty-foot shaft.

**Ida Bell.**—(See Narragansett Mining Company.)

**Ida Brooks.**—(See Eva Conway and Ida Brooks.)

**Ida L. Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, W. R. Chadbourne; vice-president and manager, J. M. Wallace; secretary and treasurer, T. W. Thompson—all Leadville; office Room 25 Boston Block, Leadville; owns the Ida L. and John R. lodes, 1500x150 feet each; situated on Jacque Mountain, Ten-mile district; located in 1882, and in process of patent; veins both contacts from six to eight feet in thickness, pay streaks from six to thirty-two inches, containing galena in a sandstone gangue, milling, when sorted, $54 net per ton; developed by a

tunnel 125 feet long, ten levels twenty-five and fifty feet in length, opening up the veins for seventy-five feet, and other workings.

**Idalia Silver Mining Company (The).** — Incorporated under the laws of Colorado in July, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, O. F. Woodruff; vice-president, Chas. Bent; treasurer, Frank Clendennin; manager, Warren Woods—all Morrison, Ills.; secretary, Harry E. Woods, Warren, O.; owns five claims, 150x1500 feet each, viz.: Idalia, Bunker Hill, Silver Tip, Little Mite, and Evening Star; located in 1878–79; the Silver Tip and Little Mite patented in 1882, and others in process of patent; situated on Sheep Mountain, at Robinson, Ten-mile district; veins all contacts from four to eight feet thick, containing carbonates, oxides, and galena, in a sandstone gangue, milling, when sorted, from twenty to fifty ounces silver per ton; developments—two inclines 80 and 100 feet long, a cross-cut and level fifty feet long, and six shafts from twenty-five to fifty feet in depth; worked by steam machinery.

**Imperial Mining Company.**—(See Park County); owns the Corning lode, 1500x300 feet; situated on the Blue River slope of North Star Mountain, nine miles from Alma, Pollock district; vein a fissure, with a crevice four feet wide, containing gold quartz (stamp-rock) and iron pyrites (smelting-ore), yielding, when sorted, from $10 to $80 per ton; developed by a tunnel fifty feet long.

**Independence Group.**—Five claims, 150x1500 feet each, viz.: Independence, Homer, Chipmunk, Excelsior, and White Pine; situated on the east slope of Humbug Hill, one-half mile east of Lincoln, Avalanche district; located in August, 1879; owners L. B. Wheeler, F. H. and Augustus Schmidt, and H. Stall, all Lincoln City, and Henry Strickler and Alfred Ebert, both Denver; veins all fissures from one to ten feet wide, through which is scattered a galena ore, assaying from five to twelve ounces silver and a trace of gold per ton; developed by five tunnels from fifteen to thirty feet in length, one twenty-foot shaft, and a cross-cut 275 feet long, designed for the development of the entire property.

**Indian Queen Group.**—Comprising the Indian Queen, Wasoola, Belmont, Raven, Clarkson, and Garbutt lodes; owned by Geo. S. Clarkson, Leadville; claims 1500x150 feet each; situated on the apex of North Star Mountain, Pollock district, nine miles from Breckenridge; located in October, 1881; veins all contacts, with quartzite and porphyry walls from eight to forty feet thick, containing free-milling gold and silver quartz, yielding, when sorted, from $30 to $60 per ton; developed by three tunnels from thirty-five to forty-five feet in length and two shafts fifteen feet deep each.

**Indiana Placer.**—Twenty-seven acres; situated in Indiana Gulch, between Argentine and Dyerville; located in August, 1882; owner Jno. A. Campbell, Argentine; developed by fifty feet of flume; worked by ground sluice.

**Iowa.**—150x1500 feet; situated on the north slope of Teller Mountain, two and one-half miles from Montezuma, Snake River district; located in April, 1880, and in process of patent; owners T. R. Newman and T. E. Clery, both Montezuma; vein a fissure forty inches wide, pay streak seventeen inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and twenty-five ounces silver per ton; developed by four shafts from twelve to twenty-five feet in depth, with a twenty-foot drift from bottom of the deepest; output fifty tons.

**Iowa and Cucumber.**—Owned by L. P. Appelman, Breckenridge



claims 150x1500 feet each; situated on south slope of Iowa Hill, one mile from Breckenridge, near the Brooks-Snider property; located June 20, 1882; vein a contact five feet wide, containing free-milling lime quartz carrying silver, assaying a good gold trace and from ten to fifteen ounces silver per ton; developments—one ten-foot discovery shaft on each claim, and on the former a twenty-five-foot open cut, with a sixty-foot tunnel from end of cut, and on the latter one fourteen-foot shaft.

**Iowa Hill Placer.**—Owned by Col. A. J. Ware, Breckenridge; claim covers 460 acres; situated in Iowa Gulch, and on the Blue River, one mile from Breckenridge, and in process of patent; developments—seven miles of water-ditch and 260 feet of fluming; worked by two Giants put together with clamps, belts, rubber, and leather, 1,000 feet of iron piping made of California corrugated iron (the only piping of the kind in the county), and two large reservoirs for booming; estimated output $300,000; the gold-producing banks in this property are eighty feet high, unworked, and bed-rock not yet reached.

**Iron.**—Owned by Daniel D. Kelly, John Lappin, and Patrick Scanlan, all Kokomo; claim 1500x150 feet; situated on the south slope of Jacque Mountain, Ten-mile district; located in 1879; vein a contact four feet wide, containing sandstone and galena, assaying fairly; developed by a shaft seventy-five feet deep and other workings.

**Iron Cap.**—J. S. Smith and Daniel Kehoe, both Quandary City; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, one-fourth mile from Quandary; located in July, 1882; vein a fissure three feet wide, pay streak twelve inches, containing quartz, yellow copper, and galena, assaying $50 per ton in gold and silver; developed by a twenty-foot tunnel.

**Iron Duke, I. O. U., Iron Mask, and Fawn.**—Four claims, 150x1500 feet each; situated on the north-east slope of Humbug Hill, two miles from Lincoln; located in May, 1882; owners Wm. Johns, Swan City, and Edward C. Dennison, Elizabeth, N. J.; vein a contact forty inches wide, pay streak eight inches, containing free-milling gold quartz, assaying $12 per ton in gold and silver; developed by four shafts, one on each claim, from twelve to fifteen feet in depth, and one twenty-three-foot open-cut.

**Iron Duke and Iron King.**—Two claims, covering 150x1500 feet each; situated on the south slope of Mineral Hill, three miles south-east of Breckenridge; located in May, 1880; owners Jno. M. Mairs, Breckenridge, B. D. Spencer, T. B. McCormick, and F. W. Hill, all Denver; vein a vertical fissure four feet wide, pay streak nine inches, containing galena in a porphyry gangue, milling, when sorted, forty per cent lead and twenty-five ounces silver per ton; developed by two shafts twelve and twenty feet deep, one tunnel seventy feet long, and other workings.

**Iron King.**—Owned by C. C. and R. F. Smith and Albert Vanatter, all Breckenridge; claim 1500x150 feet; situated on the French Gulch slope of Mineral Hill, one and one-half miles from Breckenridge; located in July, 1880 vein a fissure sixteen feet wide, pay streak from one to two feet, containing porphyry, galena, and iron pyrites, assaying fifty ounces silver and one-fifth ounce gold per ton; developed by a shaft ninety feet deep, two tunnels 100 and 120 feet in length, and other workings.

**Iron King Consolidated Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in December, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, J. A. Pace, Denver; manager, W. R. Corbett, Robinson; office 268 Four -

teenth street, Denver, and Robinson, Colo.; owns five claims, 150x1500 feet each, viz.: Forest Lily, situated on the south-east slope of Sheep Mountain, Ten-mile district; located in 1878, and patented in 1881; vein a fissure three feet wide, containing sandstone, galena, and iron pyrites, assaying sixteen ounces silver per ton; developed by four shafts from twelve to thirty-five feet in depth; Iron King, Black Prince, and National, situated on the east slope of the Chicago Range, three miles from Robinson, and located in 1878; vein probably a contact, five feet thick, containing decomposed matter, oxidized iron, and carbonates, assaying from ten to forty ounces silver per ton; developed by five tunnels from twenty-five to sixty feet in length; and Lady Ellis, on the north slope of Fletcher Mountain, four miles from Robinson; located in 1878; containing two fissure veins forty and thirty inches wide of quartz and galena, assaying from twenty-five to fifty ounces silver per ton; developed by one tunnel twenty-five feet long.

**Iron Mask.**—Owned by Hiram Johnson, Breckenridge, Wm. M. Byers and C. H. McLaughlin, both Denver; claim 1500x150 feet; situated on the west slope of Mineral Hill, two and a half miles from Breckenridge, and located in 1879, and patented in December, 1881: vein a fissure two and a half feet wide, pay streak from five to ten inches, containing porphyry and galena assaying 100 ounces silver per ton; developed by two shafts eighteen and forty feet in depth and other workings.

**Iron Mask and Iron Mask Extension.**—Two claims, 150x1500 feet and 150x100 feet, respectively; situated on the east slope of Tucker Mountain, two miles from Kokomo, Ten-mile district; located in 1878 and 1879, and the former patented in 1881; owners J. E. Wheeler and C. E. Noble, both Colorado Springs, G. W. Lindgreen and B. F. Follett, both Kokomo; vein a contact four feet thick, containing iron ore in a sandstone gangue, milling, when sorted, ten ounces silver per ton; developed by two open cuts twenty and twenty-five feet long, one ten-foot level, and one tunnel 421 feet long.

**Iron Mask and Kewanee.**—Owned by Samuel M. Blair, Edward Carter, and W. H. Wilkinson, all Breckenridge; claims 1500x150 feet each; situated on the north slope of Shock Hill, one mile from Breckenridge; located November 22, 1878; vein a fissure ten feet thick, containing hematite iron, milling thirty per cent iron and six ounces silver per ton, underlying which is a product yielding thirty per cent lead and 100 ounces silver per ton; developed by three tunnels, 75, 93, and 135 feet in length, and other workings; output 500 tons.

**Irondequoit.**—Owned by Charles W. Clark, Cincinnati, O.; manager, H. G. Hamilton, Breckenridge; claim 1500x150 feet; situated on the west side of Peak No. 10 of Ten-mile Range, Ten-mile district, six miles from Kokomo; located in June, 1881; vein a fissure three feet wide, containing quartz, galena, yellow copper, and black sulphurets, milling, when sorted, from $50 to $100 per ton; developed by a drift on the vein forty feet long and some improvements; output thirty tons.

**Ivanhoe Group.**—Owned by J. W. Swisher and John Earl, both Montezuma, and George Quackenbush, Kokomo; group comprises the Ivanhoe, Memento, Fairview, and Swisher lodes, 1500x150 feet each; situated on the south slope of Lenawee Mountain, Peru district, one mile from Montezuma; located in June, 1881; veins all fissures from four to thirty feet in width, pay streaks from three to nine inches, containing quartz and galena, assaying from ten to seventy-five ounces silver and some gold per ton; developed by three tunnels, forty-five, fifty-six, and ninety feet in length, and other workings.

**J. A. D.**—Owned by R. Redin Kirk, Breckenridge; claim 1500x150 feet; situated on the Blue River, four miles above Quandary, ten miles west of



Breckenridge, Pollock district; located October 29, 1882; vein a fissure twenty-four inches wide, containing galena and gold quartz, assaying twenty per cent lead, seven ounces silver, and one-fourth ounce gold per ton; developed by a forty-foot open cut and a shaft twenty feet deep.

**J. C. Gilroy and Little Rosedale.**—Owned by Michael Brennan, Breckenridge, J. C. Gilroy, William Slattery, and William Snape, Kokomo; claims 1500x150 feet each; situated on the north slope of Sheep Mountain, Ten-mile district, one and one-half miles from Robinson; located in February, 1880; vein a fissure about three feet wide, containing sandstone, galena, and sulphurets, assaying forty ounces silver per ton; developed by a tunnel sixty-five feet long, a shaft twenty-five feet deep, and other workings.

**Janitor.**—(See Sunrise and Janitor.)

**Janus Group.**—Comprising the Janus, Junius, and Achilles; owned by J. Brogan, William Jenks, J. L. Hockett, and Patrick Somers, all Alma; claims 1500x150 feet each; situated on the north slope of Mount Quandary, Pollock district, nine miles from Breckenridge; located in July, 1882; veins all fissures thirty inches wide, containing quartz and yellow copper, milling, when sorted, twenty-five per cent copper, thirty ounces silver, and one ounce gold per ton; developed by three open cuts ten feet long each and one thirty-foot shaft; output ten tons.

**Jason and Grantham Group.**—Comprising the Jason, Scott, Gray Eagle, and Grantham lodes, 1500x150 feet each; owned by Wm. Bemrose, Alma, (H. P. Parmelee and George O. Scott, both Denver, are interested in the Jason and Scott); group situated on the north slope of North Star Mountain, Pollock district, eight miles from Alma; located in 1879, and Jason and Scott patented in May, 1880; veins all fissures averaging four feet in width, containing free-milling gold and silver quartz, assaying one and one-half ounces gold and five ounces silver per ton; Jason developed by an open cut and tunnel 100 feet long; Scott by a fifty-foot cut, a ten-foot shaft, an open cut, and tunnel sixty feet long, a thirty-foot cut, and a fourteen-foot shaft; Gray Eagle by a ten-foot shaft and a fifteen-foot cut; and Grantham by two cuts thirty and twenty feet in length; output sixty tons.

**Jay Gould, Jay Gould No. 2, and Pollock.**—Three claims, covering eleven acres; situated on the south-east slope of Elk Mountain, three-fourths mile from Kokomo, Ten-mile district; located in 1881, and the first and last patented in 1882; owners Wm. P. Pollock, Jno. L. Reardon, and G. T. McDonald, all Kokomo, and N. B. Noland, Ashland, Va.; vein a fissure from three to four feet wide, containing sandstone and carbonates, assaying fairly; developed by an eighty-foot shaft and a twenty-five-foot drift.

**Jennie.**—Owned by T. E. Kleckner, Breckenridge; claim 1500x150 feet; situated on the west slope of Silver Hill, two miles south-east of Frisco; located May 25, 1882; vein a fissure six feet wide, containing pockets of a gray-copper ore scattered through the vein-matter, assaying an average of fifty and sometimes as high as 2,000 ounces silver per ton; developed by two shafts twenty and ten feet in depth.

**Jennie.**—150x1500 feet; situated on the north slope of Collier Mountain, one mile from Chihuahua, Peru district; located in July, 1880; owners J. A. Johnson, Chihuahua, and Walter Pullyon, Warsaw, Ky.; vein a fissure two feet wide, pay streak three inches, containing galena and quartz, assaying forty ounces silver per ton; developed by one twelve-foot shaft and one cross-cut twenty feet long.

**Jennie B. Group.**—Owners Corle Bros., Wm. Brett, and Stanley

Stokes; manager, Warren Corle—all Boulder City; group comprises the Jennie B, Telephone, Head-light, Calcium Light, Nettie B., and One-eyed Barber lodes, 1500x150 feet each; situated on the west slope of Lenawee Mountain, Peru district, two and one-half miles from Chihuahua; located in 1880, and partially in process of patent; veins all fissures from two to four feet in width, pay streaks from one to six inches, containing quartz, galena, gray copper, and green bromides, assaying from 30 to 3,000 ounces silver per ton; Jennie B. developed by a tunnel 180 feet long, and an adit twenty-five feet long with a ten foot shaft, and the others by shafts and open cuts from ten to twenty-five feet.

**Jerusalem Placer.**—Owned by R. L. Nute, Ira C. Grant, A. H. Grant, and M. H. Huntress, all Breckenridge; claim covers thirty-five acres; situated in Illinois Gulch, adjoining the Berlin placer, two and one-half miles from Breckenridge; located January 1, 1882, and patented in October, 1882; developed by three shafts, twelve, fifteen, and twenty feet in depth, and a forty-foot tunnel, the latter cutting a contact vein four feet wide, pay streak twelve inches, containing porphyry, galena, and gray copper, assaying fairly.

**Jessie.**—Owned by W. H. McDonald, Breckenridge, and E. F. Smith and Geo. Pennington, both Randolph, N. Y.; claim 1500x150 feet; situated on the south slope of Nigger Hill, three miles south-east of Breckenridge; vein a fissure twenty inches wide, pay streak from two to four inches, containing galena and porphyry, assaying sixty per cent lead and sixteen ounces silver per ton; developed by two shafts twenty and thirty feet in depth and other workings.

**Joe Gould and Shamrock.**—Two claims, 150x1500 feet each; situated on the west slope of Keifer Mountain, four miles from Frisco, Ten-mile district, and located in June, 1881; owners Henry Learned, Frisco, and B. F. Stickley, Leadville, in trust for the Mount Royal Mining Company; vein a fissure forty inches wide, containing gray and native copper, galena, and quartz, assaying $60 per ton in gold and silver; developed by two open cuts fourteen feet long each.

**Joe Jefferson and Edwin Booth.**—Owned by D. S. Vaughan W. L. Doncaster, both Recen; claims 1500x150 feet each; situated on the west slope of Fletcher Mountain, Ten-mile district, three and one-half miles from Kokomo, and located in August, 1881; vein a fissure five feet wide, pay streak from ten to fifteen inches, containing quartz, galena, and sulphurets, assaying one-tenth ounce gold and fifty ounces silver per ton; developed by a thirty-foot tunnel.

**John C. Davis.**—Owned by John C. Davis and John Liston, both Montezuma; claim 1500x150 feet; situated on the south slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma; located August 23, 1882; vein a fissure four feet wide, pay streak eight inches, containing quartz, galena, and gray copper, assaying thirty per cent lead and from twenty-five to seventy-five ounces silver per ton; developed by a shaft twenty feet deep.

**John Cameron.**—150x1200 feet; situated on the west slope of Keifer Mountain, four miles from Frisco, Ten-mile district; located in August, 1880, and in process of patent; owners Ed. Parker and West Lowe, both Frisco, and C. N. Holden, Chicago; superintendent, Jesse M. Holden, Frisco; vein a fissure five feet wide, pay streak eighteen inches, containing galena and quartz, assaying thirty-four ounces silver per ton; developed by one forty-foot tunnel.

**Johnson.**—150x1500 feet; situated on the west slope of Lenawee Mountain, two miles from Chihuahua, Peru district; located in June, 1879; owners B. Zemansky, Georgetown, O. Anderson, Denver, and J. A. Johnson, Chihuahua; vein a fissure five feet wide, with three pay streaks from one to two inches wide, containing gray copper and brittle silver in a quartz gangue, milling, when sorted, 300 ounces silver per ton; developed by one seventy-two-foot tunnel and other workings.



**Jones Group.**—Owned by C. B. Eggleston and P. W. Jones, both Montezuma; group comprises the Jones, Grand Central, and Evening Star lodes, 1500x150 feet each; situated on the west slope of Glacier Mountain, Snake River district, one-half mile from Montezuma; located in July, 1880; veins all fissures from four to eight feet, containing quartz, galena, and sulphurets, assaying from 25 to 200 ounces silver per ton; developed by three twenty-foot shafts and other workings.

**Josephine.**—Owned by Samuel S. Lesher and William Wilkin, both Breckenridge; claim 1500x150 feet; situated on the north-east slope of Bald Mountain, Bald Mountain district, adjoining the Treasure Trove lode, with similar characteristics; is developed through the Treasure Trove workings.

**Josephine Group.**—Comprising the Josephine, Old Joe, Hill-side, and Abbie lodes; owned by D. B. Perkins and T. Hildebrand, both Lincoln City; claims 1500x150 feet each; situated on the south slope of Humbug Hill, at Lincoln City; located in 1880–81; veins all fissures five feet in width, containing quartz and galena, assaying from $30 to $40 per ton; developments—on the Josephine a fifty-foot tunnel, on the Old Joe a twenty-foot shaft, on the Abbie a forty-foot shaft, and on the Hill-side a fifteen-foot shaft.

**Josie.**—150x1500 feet; situated on Kelleher Mountain, at Rock Creek, twenty-two miles from Frisco, Wilkinson district; located in October, 1881; owners Wm. Clifford, G. F. Roth, H. E. Hoffman, C. W. Weis, V. J. Coyne, and Harry Evans, all Frisco; vein a fissure three feet wide, pay streak from four to ten inches, containing sulphurets in a quartz gangue, milling, when sorted, one-half ounce gold and 110 ounces silver per ton; developed by one tunnel eighty-five feet long and one ten-foot level.

**Jubilee and Grand View.**—Owned by W. F. Rowen, Decatur, and David Vessels, H. P. Walker, and D. J. Hutchinson, all Boulder; claims 1500x150 feet each; situated on the west slope of McLellan Mountain, Peru district, three miles from Decatur; located in 1881; veins all fissures from three to five feet in width, pay streaks from ten to twenty inches, containing galena, gray copper, and zinc, in a quartz gangue, milling, when sorted, 150 ounces silver per ton; developed by a tunnel forty feet long and two ten-foot shafts.

**Judge Hill.**—Owned by Relief Jackson, Lafayette, Ind., and H. Hill, Jos. Turner, J. L. Fuller, and F. L. Crome, all Breckenridge; claim 1500x150 feet; situated on the north slope of Coss Hill, Congers district, four miles from Breckenridge; located July 30, 1879, and in process of patent; vein a fissure six feet wide, containing pockets of silver spar, assaying from 130 to 300 ounces silver per ton; developed by two shafts thirty and ten feet in depth and an open cut twenty feet long and ten feet deep.

**Juniata.**—150x1500 feet; situated in Nigger Gulch, two miles from Breckenridge; located in 1876; owners F. P. and West Yingling, both Breckenridge; vein a fissure two feet wide, pay streak from four to ten inches, containing lead carbonates and decomposed matter, assaying thirty per cent lead and fifteen ounces silver per ton; developed by five shafts from twenty-five to seventy-five feet in depth.

**Katie C.**—Owned by Joseph Coles, George Kappus, and Ed. D. Sayers, all Recen; claim 1500x150 feet; situated on Jacque Mountain, Ten-mile dis-

trict, two miles from Kokomo; located in 1879; vein a contact four feet wide, containing sandstone and galena, assaying twenty-eight ounces silver per ton; developed by a ten-foot shaft.

**Kearsarge Group.**—Owned by Michael, John, and James Ryan, all Robinson, and J. M. Severn, Denver; group comprises the Kearsarge, Severn, Triangle, Tex, Mountain Quail, Iron Rod, and Mountain-lion lodes, covering thirty-two acres; situated on the south-east slope of Sheep Mountain, Ten-mile district, one mile from Robinson; located in 1879; veins all contacts from two to six feet wide, containing galena and some carbonates in a quartz gangue, milling, when sorted, twenty per cent lead and forty ounces silver per ton; developed by ten shafts from fifteen to seventy-five feet in depth, one tunnel 160 feet long, and other workings; operated by a fifteen-horse-power engine.

**Kemlin.**—Owned by J. K. McDonald, Robinson; claim 1500x150 feet; situated on Bartlett Mountain, Ten-mile district, three and one-half miles from Robinson; located in 1880; vein a contact from two to three feet thick, containing lime interspersed with galena and iron pyrites, assaying forty ounces silver per ton; developed by a tunnel twenty-five feet long and a shaft thirty feet deep.

**Kennebec and Snow-drift.**—Two claims, 150x1500 feet each; situated at the head of the Middle Swan River, eight miles east of Swan City, Swan River district; located in July, 1880; owners H. B. Turner, Swan City, and —— Hawkins, Rexford; vein a fissure forty inches wide, containing quartz, galena, and copper, carrying gold and silver; developed by two shafts twenty-four and twenty feet deep.

**Keno.**—150x1500 feet; situated on the south slope of Collier Mountain, one-quarter of a mile from Montezuma, Snake River district; located in June, 1880; owners Fred. Barton and W. J. Lusher, both Montezuma, and T. Grocladt, Denver; vein a fissure five feet wide, pay streak from one to four inches, containing galena in quartz; developments—assessment work.

**Kentucky.**—(See Mineral Hill Tunnel Company.)

**Kentucky Boy and Enterprise.**—Owned by J. K. Mercer and Frank C. Ramsey, both Robinson, and Chas. E. Pritner and others, Leadville; claims 1500x150 feet each; situated on the south slope of Sheep Mountain, Ten-mile district, three-fourths of a mile from Robinson, and located in 1879; veins both contacts two and one-half and four and one-half feet in width, containing sandstone and galena, assaying twenty-eight ounces silver per ton; developed by a tunnel twenty feet long and three shafts from eleven to eighteen feet in depth.

**Kentucky Tunnel Site.**—6x3000 feet; situated on the south slope of Carbonate Hill, three miles from Breckenridge, and located in July, 1881; owners A. C. Lockhead, Breckenridge, C. G. Perkins, G. W. Fallon, Jos. Beach, James McLaughlin, and Henry Konhorst, all Henderson, Ky.; on which a tunnel is driven 450 feet, cutting a fissure vein ten inches wide, containing porphyry and galena, assaying $6 per ton, and designed to cut all blind leads on the same slope of the mountain.

**Kerney.**—150x1500 feet; situated on the south slope of Sheep Mountain, one mile from Kokomo, Ten-mile district, and located in January, 1881; owners Oliver Swanson and Martin Berg, both Robinson, J. A. Johnson and A. B. Johnson, both Kokomo; vein a contact varying in thickness, containing sandstone and galena; developments—one twenty-five-foot shaft and one twenty-five-foot tunnel.



**Kewanee.**—(See Iron Mask and Kewanee.)

**Keystone Bullion Company (The).**—Incorporated under the laws of New Jersey, in April, 1883; capital stock $100,000, in 100,000 shares of $1 each, non-assessable; president, Jno. J. Zeigler; vice-president, Jno. H. Shriver; treasurer, D. J. Chapman; secretary, J. J. G. Felton—all Philadelphia; general manager, Col. A. J. Ware, Breckenridge; offices 426 Walnut street, Philadelphia, and Breckenridge; owns a smelting-works, situated at Breckenridge, containing one Water-jacket and two Reverberatory Furnaces with Stacks, one Blake and one Dodge Crusher, one set Cornish Rolls, and Elevator, two Hartz Jigs, one Rogers Jig, one Rittinger Table, one Embry Table and eight Stop-boxes and Buddles, motive power supplied by a fifty-nine-horse-power engine and ample boiler, two Knowles Steam Pumps and one Plunge Pump; capacity 100 tons per day; ore-house, capacity 1,000; dwelling-house, assay-room, office, scale-room, blacksmith and carpenter shop, etc. (These works were formerly owned by the Boston and Breckenridge Smelting Company now defunct.)

**Keystone Group.**—Comprising the Keystone, Anchor, and Bell lodes; owners C. C. Westerman and H. E. Lindsey, both Breckenridge, and H. P. Westerman, Pekin, Ill.; claims 1500x150 feet each; situated on the French Gulch slope of Nigger Hill, at Breckenridge, and located in December, 1879; vein a contact, or a porphyry dike, composed of decomposed quartz and porphyry thirteen feet thick, containing galena in a quartzite, gangue, milling, when sorted, from $20 to $40 per ton, and some copper assaying from $50 to $75 per ton in gold, silver, and copper; developed by two shafts eighty-two and eleven feet in depth, three tunnels, eighty (sixty-five feet in mineral), sixty-two, and twenty-six feet in length, and other workings; output 200 tons, and it is the intention to erect a mill to treat their ores.

**Kintuck.**—150x1500 feet; situated on the south slope of Silver Mountain, one-half mile from Decatur, Peru district, and located in 1879; owners James and Jno. J. Noonan, both Decatur; vein a fissure five feet wide, pay streak from fifteen to twenty inches, containing gray copper and quartz, assaying from 250 to 750 ounces silver per ton; developed by one shaft thirty-feet deep.

**Kirksville and Morning Star.**—Owned by James A. Robinson, J. L. McDill, and G. W. Dunham, all Quandary City; claims 1500x150 feet each; situated on the south slope of McCullough Mountain, Pollock district, one and a half miles from Quandary City, and located in April and July, 1882; veins both fissures from two to four feet wide, pay streaks from ten to thirty-two inches, containing gold and silver bearing quartz, assaying from 100 to 200 ounces silver and from $2 to $24 in gold per ton; developed by two tunnels twenty-two and thirty-one feet in length, with some improvements.

**Kirthly.**—Owned by Anthony A. Davis, Benjamin Brown, and the Caledonia Mining Company, all Georgetown; claim 1500x150 feet; situated on McClelland Mountain, Peru district; located in 1880; vein a fissure three feet wide, containing quartz, galena, and gray copper, assaying sixty-five ounces silver per ton; developed by a tunnel forty-five feet long and a twenty-five-foot level.

**Kittanning.**—150x1500 feet; situated on the west slope of Collier Mountain, one mile from Montezuma, Snake River district; located in August, 1880; owners H. A. Colwell, Kittanning, Pa., and R. P. Crawford, Pittsburgh, Pa.; superintendent, Wm. Howell, Montezuma; vein a fissure five feet wide,

pay streak thirteen inches, containing silver and quartz, assaying fairly; developments—one shaft forty feet deep and one cross-cut 150 feet long.

**Kittie Innes.**—(See Mt. Royal Mining Company.)

**Kokomo Belle.**—Owned by H. S. Strong, Bozeman, Montana, and J. Y. Marshall, Leadville; claim 1500x150 feet; situated in Mayflower Gulch, Ten-mile district, two and one-half miles from Kokomo; located in 1879, and patented in September, 1882; vein a contact ten feet thick, containing galena in a sandstone gangue, milling, when sorted, fifty per cent lead and thirty ounces silver per ton; developed by three shafts, eighty-three, sixty, and forty feet in depth, one ninety-one-foot tunnel through mineral, and other workings; this property is making regular shipments.

**Lackawanna and Silver Tip.**—Owned by Elmer Smith, Joseph Prest, and John E. Jones, all Quandary City; claims 1500x150 feet each; situated on the south slope of Mt. Quandary, Pollock district, one mile from Quandary; located June 20, 1882; veins both fissures sixteen and twenty-four inches in width, containing gray copper and sulphurets in a quartz gangue, milling, when sorted, $60 per ton; the former developed by an eighty-two-foot tunnel, and the latter by a ten-foot cut; improvements—shaft-house, blacksmith-shop, etc.

**Lady Huntingdon and White Top.**—Owned by J. L. Dyer, W. M. Candill, S. P. Nesbit, J. W. Clyde, and O. F. Frautz, all Breckenridge, and others; claims 1500x150 feet; situated on the north slope of Nigger Hill, four miles from Breckenridge; located April 16, 1880; vein a fissure from eighteen to twenty-four inches wide, pay streak from twelve to sixteen inches, containing sand carbonates and galena in a porphyry gangue, milling, when sorted, fifty per cent lead and fifteen ounces silver per ton; Lady Huntingdon developed by two shafts 35 and 110 feet in depth, and other workings, and White Top by a forty-foot shaft.

**Lady Sanders.**—J. E. Parkinson, J. L. Dyer, and George Hannah, all Breckenridge; claim 1500x150 feet; situated on Bald Mountain, McBarnes district, seven miles from Breckenridge; located in 1882; vein a fissure four feet wide, containing gold and silver bearing porphyry: developed by a fifty-foot shaft.

**Lake Shore Silver Mining Company.**—Incorporated under the laws of Colorado, in November, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, D. A. Ireland; secretary, H. F. Clipfell; treasurer, Elmer Crockett—all South Bend, Ind.; superintendent, C. M. McMahan, Argentine; offices South Bend and Argentine; owns Argentine and Ruby, 1500x150 feet, and Little Cliff, 1138x150 feet; situated on the west slope of Brooks Hill and the south slope of Wannamaker Hill, one-half mile from Argentine; located in January, 1881; veins all fissures about forty inches wide, pay streaks from four to eighteen inches, containing galena and sulphurets in a porphyry gangue, milling, when sorted, from 25 to 550 ounces silver per ton; developed by three tunnels, 30, 170, and 145 feet in length, four shafts, twelve, fifteen, thirty, and thirty-two feet in depth, and other workings; improvements—shaft-houses, ore-houses, etc.; output 100 tons.

**Lancaster Mining Company (The).**—Incorporated under the laws of Colorado, in August, 1882; capital stock $1,500,000, in 150,000 shares of $10 each, non-assessable; president, James Thatcher; secretary, Jos. F. Lamorelle; treasurer, Wm. F. Burr—all Philadelphia; manager, Chas. Buckland, Montezuma; office 32 South Third street, Philadelphia, and at Montezuma; owns two claims, 150x1500 feet each, viz.: Lancaster, located in 1866, and patented in 1879; and the Lancaster Extension, located in 1879; situated on the west slope of Collier Mountain, three-fourths mile from Montezuma, Snake River district; vein a fissure four feet wide, pay streak five inches, containing heavy galena, milling, when sorted, fifty-five per cent lead and thirty-four ounces silver per ton; developments—three tunnels, 160, 250, and 15 feet long, one thirteen-foot shaft, and one twenty-foot open cut; output 210 tons.



**Le Grand.**—Owned by H. B. Turner, Swan City; claim 150x1500 feet; situated on the north slope of American Hill, five miles south-east of Swan City, Georgia district; located in June, 1879; vein a vertical fissure three feet wide, containing galena and quartz, assaying $20 per ton in gold and silver; developments—one twenty-foot shaft.

**Lead, Champion, and Whale.**—Three claims, 150x1500 feet each; situated on the south slope of Nigger Hill, three miles from Breckenridge; located in March, 1880; owners J. D. Roby, Breckenridge, and Hayes & Co., West Virginia; vein a contact from two to four feet thick, containing porphyry and galena; developed by one thirty-foot shaft and one forty-foot tunnel.

**Leader.**—Owned by J. D. Feidt, Chihuahua; claim 1500x150 feet; situated on the west slope of Lenawee Mountain, Peru district, two and one-half miles from Chihuahua; located in October, 1880; vein a fissure three feet wide (granite and porphyry walls), with two pay streaks four inches each, containing galena and sulphurets in quartz, milling, when sorted, twenty per cent lead, and assaying forty-five ounces silver per ton; developed by a sixty-foot tunnel.

**Leadville and Pennsylvania Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1881; president, H. W. Eddy, Salem, D. T.; vice-president, B. A. Hopkins; secretary and treasurer, James Teal—both Georgetown; general manager, J. M. Hall, Decatur; offices Georgetown and Chihuahua; owns seven claims, 150x1500 feet each, and five mill sites, five acres each, viz.: Leadville lode, Pennsylvania lode, Ouray lode and mill site, Cross lode and mill site, Sheldon lode and mill site, Pay-master lode and mill site, and Hall lode and mill site; situated on the north slope of Revenue Mountain, at Decatur, Peru district; all patented in 1882; veins all fissures varying in width, and containing quartz, galena, gray copper, and bismuth, assaying from 50 to 150 ounces silver per ton; developed by a shaft 240 feet deep, two tunnels 65 and 170 feet in length, and other workings.

**Learned Group.**—Five claims, 150x1500 feet each, viz.: T. C., Jno. C. Lopez, Muldoon, and Hope; situated on the north fork of Miner's Creek, three and one-half miles from Frisco, Ten-mile district; located in June, 1880; owners Henry Learned and A. C. Graff, both Frisco; vein a blanket from five to ten feet thick, containing decomposed matter and carbonates, assaying six ounces silver and from one to two ounces gold per ton; developed by five shafts twelve feet deep each and one tunnel 130 feet long, for the development of all the claims.

**Leclede.**—Owned by A. G. Hoopes and Chas. H. Blair, both Breckenridge, and Wm. T. Reynolds, Georgetown, Colo., owners; claim 1500x150 feet; situated on the west slope of Revenue Mountain, Snake River district, four miles from Montezuma; patented 1878; vein a fissure two and one-half feet wide, pay streak five inches, containing quartz, galena, and gray copper, assaying 100 ounces silver per ton; developed by a cross-cut tunnel 100 feet long and a thirty-foot shaft.

**Lee Group.**—(See Lima, Ohio, and Chihuahua Mining Company.)

**Legal Tender.**—150x1500 feet; situated on the west slope of Collier Mountain, one mile from Montezuma, Snake River district; located in July, 1880; owners Thos. and Leverett Howard, both Chihuahua, and Edward Howard, Burning Springs, W. Va.; vein a fissure five feet wide, pay streak three inches, containing galena and quartz, assaying thirty-five per cent lead and thirty-five ounces silver per ton; developed by one thirty-foot shaft.

**Lehigh.**—150x1500 feet; situated on the north slope of Chalk Hill, one and one-half miles from Breckenridge; located in July, 1880; owners Peter Barth, A. Lacour, and J. G. Myer, all Breckenridge; vein a fissure four feet wide, pay streak from four to eight inches, containing lead carbonates and decomposed matter, assaying twenty-six ounces silver and some gold per ton; developed by one tunnel 105 feet long.

**Leona.**—150x1500 feet; situated on the north-west slope of Bald Mountain, five miles from Breckenridge, Bald Mountain district, and located in September, 1881; owners A. B. Seybolt and W. D. Churchell, both Breckenridge; vein a fissure two feet wide of quartz carrying gold; developed by one twenty-foot open cut.

**Leone.**—(See Quincy and Leone.)

**Leopard.**—(See Ellwood Group.)

**Libby.**—Owned by A. Sweeney, Chihuahua, and Libby Bros., Georgetown; claim 1500x150 feet; situated on the north-west slope of Silver Mountain, Peru district, three-fourths mile from Decatur, and located September 24, 1880; vein a fissure eight feet wide, pay streak from one to eight inches, containing quartz, galena, and iron pyrites, assaying thirty-five per cent lead and from 25 to 200 ounces silver per ton; developed by two tunnels 50 and 180 feet in length and a twelve-foot shaft.

**Libby Baker.**—(See Ellen K. and Libby Baker.)

**Lily.**—Owned by John Evans, Decatur; claim 1500x150 feet; situated on the south slope of Silver Mountain, Peru district, one mile from Decatur, and located June 16, 1881; vein a fissure three feet wide, pay streak from five to ten inches of quartz and galena; developed by a tunnel fifteen feet long.

**Lily May.**—Owned by A. Dickenson, Georgetown; claim 1500x150 feet; situated in the Peru district, two miles from Decatur, and located in 1880; vein a fissure from eight to ten feet in width, containing quartz, with galena, assaying 100 ounces silver per ton; developed by a thirty-five-foot tunnel.

**Lima, Ohio, and Chihuahua Mining Company (The).**—Incorporated under the laws of Colorado, in 1882; president, Israel McJunkins; vice-president, A. C. Baxter—both Lima, Ohio; offices Lima and Chihuahua; owns the Lee Group, seven claims, 150x1500 feet each, viz., Little Lee, Reconstruction, Hancock, Democrat, Grub-stake, Kansas, and Nellie B.; situated on the east slope of Lenawee Mountain, two miles from Chihuahua, Peru district; located in 1880, and the first four patented; veins all fissures averaging four feet in width, pay streaks from six to eight inches, containing quartz, galena, gray and yellow copper, bismuth, and zinc, assaying from 100 to 150 ounces silver per ton; developments—one thirty-five-foot shaft, one twenty-foot tunnel, one cross-cut 300 feet long designed to cut all the above veins, and other workings.

**Lincoln City Quartz-mill.**—Situated at Lincoln; owners Timothy Murphy, Patrick McCarty, and Henry J. Litten, all Lincoln; building 30x50 feet, containing fifteen Stamps, motive power supplied by a thirty-horse-power engine and boiler; works erected on a patented five-acre mill site; capacity fifteen tons per day.



**Ling and Little Daisy.**—Owned by John Ling, Montgomery; claims 1500x150 feet each; situated on the north slope of North Star Mountain, one and one-half miles from Montgomery, Pollock district; located in June, 1882; veins both fissures five feet wide, pay streaks from ten to thirteen inches, containing quartz, yellow copper, and silvernite, assaying $200 per ton; developed by two fifteen-foot open cuts.

**Little Anna and Ready Cash.**—Two claims, 150x1500 feet each; situated on the south slope of Sheep Mountain, one mile from Robinson, Ten-mile district; located in October, 1878; owners Geo. W. Derr, Edward H. Cassidy, Thomas Hutchinson, and Frank M. Doherty, all Robinson; veins probably fissures, varying in width, and containing sandstone and galena, assaying twenty ounces silver per ton; developed by one shaft fifty feet deep and one tunnel sixty feet long.

**Little Anna and Howard Taylor.**—Owned by John P. Mc Intire, Breckenridge, Joseph T. Woolens, Greeley, and George W. Walton, Philadelphia, Pa.; claims 1500x150 feet each; situated on Bald Mountain, McBarnes district, seven miles south-east from Breckenridge; located in 1882; vein from two to six feet wide, pay streak from one to four inches, containing lead carbonates and decomposed matter, assaying $47 per ton in gold and silver; developed by a sixty-foot shaft.

**Little Annie.**—1500x150 feet; situated on the south slope of Mount Gayot, four miles from Lincoln, Jefferson district; located in June, 1880; owners D. M. Blake and A. Bowles, both Lincoln; vein a fissure three feet wide, pay streak five inches of quartz, carrying gold; developed by one twenty-foot tunnel.

**Little Annie.**—Owned by Geo. Hammerschlag, Breckenridge; claim 1500x150 feet; situated on the north-west slope of Quartzite Hill, two and one-half miles from Breckenridge, and located in August, 1880; vein a horizontal contact thirty inches thick, containing gold and silver bearing limestone, milling, when sorted, $20 in gold and ten ounces silver per ton; developed by an eighty-foot shaft and other workings.

**Little Alva and Belger.**—Owned by J. L. Welch, Alma; claims 1500x150 feet each; situated on the north slope of North Star Mountain, Pollock district, seven miles from Alma, and located in August, 1881; veins both fissures about four feet wide, seamed with gold and silver bearing quartz (stamp-rock) and iron and copper pyrites (smelting-ore), assaying $30 per ton; developed by two twenty-five-foot open cuts with fifteen-foot faces.

**Little Belle.**—Owned by James B. Garvin, Robinson, Thos. King, Silverton, Joseph Murray, Butte City, M. T., and others; claim 1500x150 feet; situated on the crest of Jacque Mountain, Ten-mile district, two miles from Kokomo; located in March, 1881, and in process of patent; vein a contact from two to three feet in thickness, containing lead carbonates and sandstone, assaying fifteen per cent lead and from 25 to 250 ounces silver per ton; developed by a tunnel seventy feet long and a ninety-foot shaft.

**Little Bessy.**—150x1500 feet; situated on the east slope of Jacque Mountain, one and one-half miles from Recen, Ten-mile district, and located in 1882; owners S. D. Piper, Henry Pomeroy, and others, Kokomo; vein a fissure three feet wide, pay streak from one to ten inches, containing galena and

sandstone, assaying ten per cent lead, from a trace to two ounces gold, and from 10 to 150 ounces silver per ton; developed by one tunnel 114 feet long.

**Little Bishop and Maud S. Group.**—Four claims, 150x1500 feet each; situated on the south slope of Lynx Mountain, one mile from Swan City, Swan district; located in May, 1882; owners D. H. Daywalt, Peter McCann, and Henry Bard, all Swan City; veins all contacts varying in thickness and showing iron pyrites and some galena in porphyry; developments—one tunnel 120 feet long started on the lowest claim and designed to cut all the above veins.

**Little Buckeye Group.**—(See Printer Boy Group.)

**Little Carbon.**—Owned by Stephen Rodman, Geo. Fister, and Neil Johnston, all Robinson; claim 1500x150 feet; situated in the Ten-mile district, two miles from Robinson; located in 1879; vein a contact varying in thickness, containing carbonates and sandstone, assaying $40 per ton in gold and silver; developed by an incline on the vein ninety feet long, a thirty-foot shaft, and other workings; output 120 tons.

**Little Champion.**—Owned by Wm. Tetzlaff, Henry R. Rhone, and Ray McLaughlin, all Recen; claim 1500x150 feet; situated on the north slope of Gold Hill, Ten-mile district, one mile from Recen; located in July, 1880; vein a contact four feet thick, containing lead carbonates and sandstone, assaying from ten to forty per cent lead and six ounces silver per ton; developed by a tunnel seventy feet long and a twenty-five-foot incline.

**Little Charlie.**—Owned by John J. Evans, Farnham Station; claim 1500x150 feet; situated on Bald Mountain, seven miles south of Breckenridge; located in 1880; vein a fissure four feet wide, containing porphyry, galena, and some gray copper, assaying from fifteen to fifty ounces silver per ton; developed by a tunnel on the vein forty feet long.

**Little Chicago Consolidated Mining Company (The).**—Incorporated under the laws of New York, in 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, Chas. Siedler; vice-president, August R. Symmes—both Jersey City; secretary, Chas. Constant, New York City; treasurer, H. H. Hoffman, Cincinnati; general manager, L. G. Cloud, Kokomo; office Kokomo; owns the Little Chicago Group, six claims, viz., Little Chicago, Monumental, Scandanavia, Normandy No. 1 and No. 2, and Emma T., 150x1500 feet each; situated on the east slope of Sheep Mountain, three-fourths mile from Kokomo, Ten-mile district, and patented from 1879 to 1882; veins all contacts from four to six feet in thickness, pay streaks from ten to thirty inches, containing galena in a sandstone gangue, milling, when sorted, thirty per cent lead and twenty ounces silver per ton; Little Chicago developed by a 270-foot incline, a 1,100-foot tunnel, and other workings, Monumental by a forty-foot shaft, Scandanavia by a twenty-foot shaft, Normandy No. 1 by a fifty-foot shaft, No. 2 by an eighty-foot incline, and Emma T. by a fifteen-foot shaft; improvements—steam machinery, motive power supplied by an eighteen-horse-power engine, shaft-house, etc.

**Little Daisy.**—(See Mineral Hill Mining and Milling Company.)

**Little Daisy.**—(See Ling and Little Daisy.)

**Little Edith.**—Owned by John Parkinson, Breckenridge; claim 1500x150 feet; situated on the west slope of Bald Mountain, seven miles south of Breckenridge; vein a fissure four feet wide, pay streak six inches, containing gold-bearing quartz; developments—assessment work.



**Little Edith.**—150x1500 feet; situated on the east or Horseshoe slope of Ruby Mountain, two and one-half miles from Decatur, Peru district, and located in July, 1881; owners S. M. Sturgeon and John Evans, both Decatur; vein a fissure forty inches wide, pay streak from four to six inches, containing gold and silver bearing quartz; developed by one tunnel twenty-five feet long.

**Little Emma, Gen. Hancock, and Lorillard.**—Three claims, 150x1500 feet each; situated on the north-east slope of Georgia Peak, and at the head of the South Swan River, seven miles from Breckenridge, and located in July, 1880; owners R. C. Cook, Breckenridge, T. T. Hill, Loveland, and John F. Stewart, Boulder; veins all fissures, in the Little Emma twenty inches wide, pay streak nine inches of silver-bearing quartz, milling $32 per ton, and in the Gen Hancock sixteen inches wide, pay streak seven inches of silver-bearing quartz, assaying seventy-five ounces silver per ton; developed by three drifts, seventy, forty, and twenty feet long, on each claim.

**Little Erney.**—(Extension of Ontario); 150x1500 feet; situated on the east slope of Humbug Hill, one and one-half miles from Lincoln City, Carpenter district, and located in June, 1881; owners Samuel McClure and J. N. Eckhardt, both Lincoln City; vein a contact eight feet thick, containing free-milling gold quartz; developed by one twelve-foot shaft and two open cuts with ten-foot faces.

**Little Gertie.**—Owned by George Puterbaugh and Mary Ryan, both Breckenridge; claim 1500x150 feet; situated on the west slope of Red Mountain, Upper Blue district, five miles from Breckenridge, and located in July, 1880; vein a fissure six feet wide, containing quartz carrying silver, and assaying thirty-four ounces silver per ton; developed by a tunnel thirty feet long.

**Little Helen Mining, Milling, and Smelting Company (The).**—Incorporated under the laws of Colorado, in November, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Rufus H. Wood; vice-president, Ed. H. Brown; secretary, Wm. F. Danna; treasurer, F. L. Tapscott—all New York; general agent, Jno. C. Davis; manager, E. L. Doyle—both Montezuma; offices (principal) Montezuma, (branch) 60 Broadway, New York; owns the Little Helen tunnel and mill site, Hidden Treasure lode and mill site, and Tunnel lode No. 1, all patented; situated on Glacier Mountain, near Montezuma, Snake River district; veins all fissures varying in width, containing galena in a quartz gangue, milling, when sorted, from 20 to 100 ounces silver per ton; developed by a tunnel on the tunnel site 215 feet long, and other workings.

**Little Ida and Ida No. 2.**—Owned by J. M. Marks, Robinson; claims 1500x150 feet each; situated on the west slope of Keifer Mountain, Ten-mile district, two miles from Wheeler; located October 15, 1881, and July 29, 1882; vein a fissure from four to eleven feet wide, containing gold quartz, milling, when sorted, $90 per ton; the former developed by an eighty-foot shaft and the latter by a ten-foot shaft.

**Little Ida, Baltimore, Home-stake, and Little Minnie.**—Four claims, 150x1500 feet each; situated on Elk Mountain, one and one-fourth miles from Kokomo, Ten-mile district; located in March, 1881; owners G. W. Whistler, Pat. O'Leary, and Jno. McCurry, all Robinson; vein a contact thirty inches thick, containing sandstone, oxidized iron, and galena, assaying from 50 to 100 ounces silver per ton; developments—four shafts from ten to seventy-six feet in depth.

**Little Keeley.**—Owned by H. H. Brown, James M. Frutchey, and A.

C. and W. V. Chappell, all Breckenridge; claim 1500x150 feet; situated on the west slope of Brooks Hill, one and one-half miles from Breckenridge; located May 10, 1882; vein a contact five feet thick, with two pay streaks eighteen and twenty-four inches, containing decomposed matter and iron carbonates, assaying from ten to thirty ounces silver per ton; developed by a tunnel thirty-nine feet long and a thirteen-foot incline.

**Little Lady Group.**—Six claims, 150x1500 feet each, viz., Little Lady, Black Prince, Little Blanche, Skywakie, Napoleon, and Empress; situated on the south slope of Gray's Peak, two miles from Chihuahua, Peru district; located in July, 1882; owners Frank DeLaMar, and others, Chihuahua; veins all fissures from four to ten feet wide, pay streaks from twelve to twenty-four inches, containing quartz, gray copper, bismuth, and ruby silver, assaying nineteen ounces silver per ton at the grass roots; developments—from ten to eighteen feet of work on each claim.

**Little Lella.**—120x1000 feet; situated on the top of Sheep Mountain, three-quarters of a mile from Robinson, Ten-mile district; located in April, 1879, and in process of patent; owners John A. Hall, Jr., J. C. Meagher, S. H. Wood, M. Hanrahan, M. Doran, J. B. Meagher, and Richard Dillon; vein a contact thirty inches thick, containing sandstone, galena, and iron, carrying silver; developments—one sixty-foot shaft and one ten-foot drift.

**Little Lizzie.**—Owned by Henry Nass, Breckenridge, and others; claim 1500x150 feet; situated on the north slope of Silverthorn Hill, one and one-quarter miles from Breckenridge; located in June, 1880; vein a contact five feet thick, pay streak fifteen inches, containing porphyry and galena, assaying from 100 to 500 ounces silver per ton; developed by a tunnel 110 feet long, and other workings.

**Little Lizzie.**—Owned by Joseph Reeder and F. L. Bush, both Breckenridge; claim 1500x150 feet; situated on the south slope of Mineral Hill, one and one-half miles from Breckenridge; located in 1881; vein a fissure five feet wide, containing porphyry, galena, and iron; developed by a forty-five-foot shaft and three open cuts from fifteen to twenty feet in depth.

**Little Lucy.**—Owned by Geo. W. Kesler, Decatur; claim 1500x150 feet; situated on the south slope of Argentine Mountain, Peru district, three miles from Decatur; located September 1, 1882; vein a fissure three feet wide, pay streak from six to thirty inches, containing quartz and galena, assaying fifty per cent lead and twenty ounces silver per ton; developed by an adit on the vein twenty-five feet long and fifteen feet deep.

**Little Maud and Rising Sun.**—Owned by J. G. Worthington, Chihuahua, Thos. Worthington, Pittsfield, Ills., and others; claims 1500x150 feet; situated on the crest of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in September, 1880, and August, 1881; veins both fissures three and eight feet in width, pay streaks from two to six inches, containing galena and copper, assaying in the former from 25 to 500 and in the latter from 25 to 900 ounces silver per ton; developed by two shafts ten and eighteen feet in depth and a tunnel forty-five feet long.

**Little Maudie.**—Owned by H. I. Robbins, Montezuma; claim 1500x150 feet; situated on the west slope of Collier Mountain, Snake River district, one and one-half miles from Montezuma; located in 1881; vein a fissure six feet in width, pay streak from six to twenty inches, containing quartz, galena, and bismuth, assaying fifty ounces silver per ton; developed by a twenty-foot shaft.

**Little Michigan.**—150x1500 feet; situated seven miles north-west



of Breckenridge; located in August, 1880; owners S. D. Wilson, G. M. Jacobs, and G. S. Gordon, all Breckenridge; vein a fissure four feet wide, pay streak six inches, containing gray copper, iron, and quartz, assaying $25 per ton; developed by one tunnel sixty-five feet long.

**Little Missouri and Savannah.**—Two claims, 150x1500 feet each; situated on Humbug Hill, at head of American Gulch, one and one-fourth miles from Lincoln, and located in July, 1882; owner R. D. La Roche, Lincoln; vein a vertical contact four feet thick, containing quartz carrying gold and silver; developments—two shafts ten and fifteen feet deep, one on each claim.

**Little Morgan.**—Owned by W. W. Moore, John C. Hunter, and Geo. A. Blanchard, all Lincoln; claim covers about four acres; situated on the top of Humbug Hill, adjoining the Ontario, one mile from Lincoln City, and located October 11, 1879; veins (there are three) all vertical contacts, six, four, and fourteen feet in thickness, containing honey-combed quartz carrying free and flower gold and some silver, and yielding well; developed by six shafts from ten to thirty feet in depth, an open cut seventy-five feet long and five feet deep, and other workings.

**Little Pittsburgh Group.**—Comprising the Little Pittsburgh, Comstock, and Flag-staff lodes; owned by W. G. Matthews and E. Edwards, both Argentine; claims 1500x150 feet each; situated on the south-west slope of Bald Mountain, at Dyerville, and located in March, 1882; veins all fissures two to four feet in width, containing porphyry and gray copper, assaying fairly; developed by a cross-cut tunnel 250 feet long, designed to cut all three veins, and one twenty-two-foot shaft.

**Little Rosedale.**—(See J. C. Gilroy and Little Rosedale.)

**Little Ruby.**—150x1500 feet; situated on the crest of Sheep Mountain, three-fourths of a mile from Robinson, Ten-mile district; located in February, 1879; and patented in 1881; owners Jno. A. Hall, Jr., Robinson, Jno. Meagher, J. F. Davidson, J. W. Virgin, and R. Bergstesser, all Leadville; vein a fissure thirty inches wide, containing galena in a sandstone gangue, milling, when sorted, from fifty to seventy-five ounces silver per ton; developed by four shafts forty feet deep each.

**Little Tina.**—150x1500 feet; situated on the east slope of Tucker Mountain, two and one-half miles from Kokomo, Ten-mile district; located in August, 1879; owner R. Morrison, Kokomo; vein probably a fissure, containing decomposed matter and lead carbonates, assaying from fifty to seventy-five ounces silver per ton; developed by two shafts twenty-five and fifteen feet deep.

**Lizzie May and No. 4.**—Owned by H. Murrow and Wm. Sigafus, both Alma; claims 1500x150 feet each; situated on the north slope of North Star Mountain, Pollock district, seven miles from Alma; located in 1878; veins both fissures eight and sixteen feet in width, containing gold quartz (stamp-rock), yielding fairly, and iron and copper pyrites (smelting-ore), assaying from $40 to $75 per ton; developed by a tunnel on each lode fifty feet long each.

**Log Cabin.**—(See Pulver Group.)

**Lola.**—Owned by Redman Wilfley, Kokomo; claim covers five acres; situated on the west slope of Gold Hill, Ten-mile district, two miles from Kokomo; located in 1879, and in process of patent; vein a contact six feet thick, pay streak from four to fifteen inches, containing sandstone and galena, assaying thirty per cent lead and fifteen ounces silver per ton; developed by a tunnel 150 feet long and other workings.

**Lona H.**—150x1500 feet; situated on the west slope of Tornado Peak, four miles from Frisco, Ten-mile district; located in March, 1882; owner V. J. Coyne, Frisco; vein a fissure thirty inches wide, pay streak eight inches, containing galena and quartz, assaying fifty-five ounces silver per ton; developed by two tunnels twenty and fifteen feet long.

**Lone Star.**—150x1500 feet; situated on the Snake River, one mile south-east of Dillon, Wilkinson district, and located in February, 1881; owners P. D. Mickel, Horace Smith, and others, all Breckenridge; vein a fissure forty inches wide, containing iron quartz and galena, assaying $15 per ton; developed by one twenty-five-foot shaft.

**Lone Star of Texas Tunnel Site.**—Owned by R. B. Stapp and Frank Blume, both Breckenridge; claim 3000x6 feet; situated on the Illinois Gulch slope of Brooks Hill, two miles from Breckenridge, and located in February, 1879; on which a tunnel is driven 282 feet long, with a fifteen-foot shaft at end of tunnel, designed to strike a deposit of lead carbonates supposed to exist lower down. There are three locations, 150x1500 feet each, made crossing the tunnel site, the surface ground of which covers the supposed deposit; owned by the same parties.

**Longfellow Group.**—Owned by John H. Farrar and others, Swan City; group comprises the Longfellow, British Boy, and Victoria lodes, 1500x150 feet each; situated on the north-east slope of Williams Hill, adjoining the I. X. L. property, Swan district, one-half mile from Swan City; located in 1879, and in process of patent; veins all contacts from five to thirty feet in width, pay streaks from six to thirty-two inches, containing galena, antimonial silver, and bismuth, in a quartz gangue, milling, when sorted, from $50 to $150 per ton; developed by a tunnel 280 feet long, five shafts from twenty to ninety feet in depth, and other workings.

**Lookout and Josephine.**—Two claims, 150x1500 feet each; situated on the west slope of Bear Mountain, eight miles from Breckenridge, McBarnes district; located in September, 1881; owners R. A. Sankey, James Wicks, and Hiram Hill, all Breckenridge; vein a fissure (or porphyry dike in red-sand rock) sixty feet wide at the outcrop, containing seams of gray copper, copper glance, and quartz scattered through the vein-matter, pay streak on foot-wall from four to fourteen inches wide, milling, when sorted, two per cent copper and 110 ounces silver per ton; developed by one tunnel 250 feet long, 200 feet of drifts, and other workings.

**Lorraine.**—Owned by A. G. Hoopes, Breckenridge, and Wm. T. Reynolds, Decatur; claim 1500x150 feet; situated in Cinnamon Gulch, Peru district, two miles from Decatur; vein a fissure eight feet wide, pay streak ten inches, containing galena, copper, and quartz, assaying 200 ounces silver per ton; developed by a tunnel 100 feet long and a forty-foot shaft.

**Loss and Gain.**—150x1500 feet; situated on the west side of Cucumber Gulch, one mile from Breckenridge; located in 1880; owners Jno. A. Campbell, Argentine, A. Shenker, Hannibal, Mo., and —— Gaggie, St. Louis, Mo.; ore body probably a deposit, thirty feet thick, and lying on the surface, consisting mainly of quartzite, carrying sulphides somewhat similar to the Brooks-Snider ore; developments—surface-workings and drifts aggregating fifty feet.

**Louie Vaughan Group.**—Comprising the Louie Vaughan, Eagle Nest, and Cross lodes, 1500x150 feet each; owned by Thomas F. Poinsett, J. D. Vaughan, and Louisa Vaughan, all Breckenridge; group situated on the south-west slope of Mount Quandary, Pollock district, twelve miles from Breckenridge; located in June and July, 1882; veins all fissures from two to ten feet in width, pay streaks from five to forty inches, containing quartz, galena and iron pyrites, assaying twenty-five ounces silver per ton; Louie Vaughan developed by an open cut and tunnel twenty-five feet long; the Eagle Nest by a twenty-five-foot open cut with a ten-foot face; and the Cross by a ten-foot open cut.



**Louisville.**—150x1500 feet; situated on the east slope of Silver Mountain, one mile from Decatur, Peru district; located in June, 1882; owners Isaac Decker and Thomas Porter, both Chihuahua; vein a fissure seven feet wide, pay streak twelve inches, containing quartz, galena, yellow copper, and brittle silver, assaying from $50 to $150 per ton in gold and silver; developed by one twenty-foot open cut.

**Loverne.**—150x1500 feet each; situated on the east slope of Carbonate Hill, four miles from Breckenridge; located in April, 1880; owners F. R. Themer and J. F. Collins, both Breckenridge; vein a contact fourteen inches thick, with lime and porphyry walls, containing limestone and iron, assaying from one to three ounces gold per ton; developed by one tunnel 120 feet long.

**Lucky.**—(See Cunard Mining Company.)

**Lucky.**—1500x150 feet; situated at the head of Willow Creek, six and one-half miles from Frisco, Wilkinson district; located in October, 1881; owners C. J. Whitaker, Frisco, and B. A. Housley, Albuquerque, N. M.; vein a fissure eighteen inches wide, pay streak six inches, containing quartz and galena, assaying ten per cent lead and thirty ounces silver per ton; developed by one ten-foot shaft.

**Lucky and Baltimore.**—Two claims, 150x1500 feet each; situated on Miner's Creek, one and one-fourth miles from Frisco, Ten-mile district, and located in June, 1880; owners Adolph Ballif and John Garreson, both Frisco; vein a contact fifteen feet thick, containing decomposed matter and lead carbonates, assaying thirty-two ounces silver per ton; developed by two tunnels 85 and 125 feet long.

**Lucky Boy.**—(See Bonanza Gold and Silver Mining Company.)

**Lucky Boy.**—Owned by Joseph Graton and Wm. Blanton, both Decatur; claim 1500x150 feet; situated on the west slope of Argentine Mountain, Peru district, three miles from Decatur, and located June 12, 1882; vein a fissure two feet wide, pay streak two inches, containing quartz, galena, and gray copper, assaying twenty-five per cent lead and fifty ounces silver per ton; developed by a tunnel fifteen feet long.

**Lucky Boy Group.**—Four claims, viz., Lucky Boy, Mountain Boy, Hole-in-the-wall, and Hill-side; owned by William Bascom and others, Swan City; claims 1500x150 feet each; situated on the north slope of Williams Hill, Swan district, one-half mile from Swan City, and located in 1880; veins all contacts from five to fifteen feet thick, containing porphyry and iron pyrites, assaying one and one-half ounces gold per ton; developments—two tunnels 90 and 110 feet in length, two shafts eighty and ninety feet in depth, and other workings.

**Lucky Star, North Star, and Crystal.**—Three claims, 150x1500 feet; situated on Beach Mountain, near the Ute Pass, eighteen miles from Dillon, and located in October, 1881; owners Alex. Gilbert, New York E. Beach, Breckenridge, and W. H. Radford, North Bloomfield, Cal.; veins all fissures from two to four feet wide, pay streaks from four to fourteen inches of quartz carrying gold, silver, and copper, and assaying $3 in gold and from

fifteen to thirty ounces silver per ton; developed by three shafts, fifty, twenty, and twenty feet deep.

**Luzerne Group.**—Three claims, viz., Luzerne, Rocky Mountain, and Hockett, 1500x150 feet each; owned by Wm. Jenks, John Brogan, J. L. Hockett, and P. Somers, all Alma; group situated on the north slope of North Star Mountain, Pollock district, eight miles from Breckenridge, and located in April, 1882; veins all fissures, crevices thirty inches wide, pay streaks from six to twelve inches, containing gold and silver quartz, assaying some gold and fifty ounces silver per ton; developed by three open cuts twelve feet long each, with twelve-foot faces.

**M. J.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district, and located in May, 1881; owners Archie McDonald, Jr., Alma, and W. W. Bredin, Leadville; vein a fissure four feet wide pay streak fourteen inches, containing telluride quartz carrying gold and silver and assaying from $40 to $50 per ton; developed by one twenty-five-foot tunnel.

**McDefit.**—Owned by D. T. Mitchell, Kokomo, and Wm. E. Lee, Leadville; claim 1500x150 feet; situated on Sheep Mountain, Ten-mile district, one-half mile from Kokomo; located in 1879; vein a contact from two to four feet thick, containing sandstone and galena, assaying forty ounces silver per ton; developed by an incline sixty-five feet long.

**McDonald.**—(See A. McDonald.)

**McLeod Placer.**—Twenty-seven acres; situated in Indiana Gulch, three miles above Breckenridge, Miner's district; located in 1873; owners S. P. Conger and D. C. Stover, both Argentine; developments—200 feet of fluming, and worked by ground sluice.

**McNulty Gulch Placer.**—Owned by Perry H. Brandon and the estate of B. F. Brandon, both Robinson, Colo., and James McNasser, California; claim covers 160 acres; situated in McNulty Gulch, Ten-mile district, one-half mile from Robinson; located in 1880; developed by two miles of ditching, worked by hydraulic pressure, and has produced from $5 to $10 per cubic yard.

**McPherson and Ida.**—Owned by F. F. Mullen and Nelson and Paul Murray, all Alma; claims cover 1500x150 feet each; situated on McCullough Mountain, Pollock district, eight miles from Alma; located in 1882; veins both fissures four feet wide, pay streaks from eight to twelve inches, containing galena and yellow copper, assaying $60 per ton; developed by two tunnels twelve feet long each.

**Maggie Bailey.**—Owned by Joseph K. Wilson, Chihuahua; claim 1500x150 feet; situated on the south-east slope of Lenawee Mountain, Peru district, one-half mile from Chihauhau, and located in May, 1881; vein a fissure five feet wide, pay streak ten inches, containing quartz, galena, and yellow copper, assaying from 50 to 100 ounces silver per ton; developed by a fifteen-foot shaft.

**Maggie Placer.**—Elizabeth Fuller and Frederick Crome, both Breckenridge, Colo., and Samuel A. Richardson, Gallatin, Mo., owners; claim covers 121 acres; situated in the channel of the Blue River, one-fourth mile south of Breckenridge; located in 1870, and patented in April, 1881; developed by ditches, flumes, etc., and has produced from $1 to $8 a day per man; output probably $25,000.

**Magnet.**—1500x150 feet; situated on the south slope of Clifford Mountain, eight miles from Frisco, Wilkinson district, and located in August, 1882; owners E. G. Stiles, Chicago, and James W. Allen, Lincoln City; vein a fissure thirty inches wide, pay streak three inches, containing silver-bearing quartz; developed by one fifteen-foot open cut with a sixteen-foot face.



**Magnolia Group.**—Owned by James T. Stewart, W. F. Dunham, Henry Stiles, Henry Buker, and John Rourke, all Robinson; group comprises the Magnolia, Silver Glance, Silver Nugget, and Silver Chord lodes, 1500x150 feet each; situated on the south-east slope of Sheep Mountain, Ten-mile district, one-fourth mile from Robinson; located in 1881 and 1882; veins all contacts from ten to eighteen inches thick, containing sandstone carbonates and galena, assaying fifteen per cent lead and thirty ounces silver per ton; developed by seven shafts from ten to seventy-five feet in depth, and other workings; improvements—shaft-house, etc.

**Maid of Orleans.**—1500x150 feet; situated in Chihuahua Gulch, one-half mile from Chihuahua, Peru district, and located in September, 1882; owner John McCabe, Chihuahua; vein a fissure varying in width, and containing pockets of galena, copper pyrites, and sulphurets, assaying from 50 to 150 ounces silver per ton; developed by one twenty-foot drift and one ten-foot shaft.

**Maid of the Mist Mining Company.**—(Unincorporated); manager, J. L. Welch, Alma; owns the Maid of the Mist lode, 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, seven miles from Alma; located in 1878, and patented in January, 1882; vein a fissure from three to eight feet wide, pay streak from one to three feet, containing gold and silver bearing quartz, milling, when sorted, an average of $66 per ton; developed by two tunnels 28 and 115 feet in length, and other workings; improvements—boarding-house, shaft-house, etc.; output 150 tons.

**Malinda.**—(See Ella and Malinda Group.)

**Mammon and Melissa.**—Owned by Wm. Tracy and Kasper Hoeffel, both Chihuahua; claims 1500x150 feet each; situated on the north slope of Collier Mountain, Peru district, two miles from Chihuahua; located June 17, 1882; vein a fissure seven feet wide, pay streak ten inches, containing quartz and galena, assaying fifty per cent lead and 100 ounces silver per ton; developed by two tunnels sixty and thirty-five feet in length, and other workings.

**Mammon Vault Tunnel and Shylock.**—Two claims, 150 x1500 feet each; situated on Carbonate Flats (Brown's Gulch), nine miles north-east of Breckenridge, Swan district; located in April, 1882; owners Henry Dennison, Elizabeth, N. J., and Wm. Johns, Swan City; veins all vertical contacts (lime and porphyry walls) from four to twelve feet wide, pay streak twenty inches, containing porphyry, galena, and iron, assaying thirty-two per cent lead and fifty-five ounces silver per ton; developments—on the former one tunnel 110 feet long and one cross-cut ten feet long, and on the latter one ten-foot shaft.

**Mammoth.**—Owned by Samuel Flint, Golden; claim 1500x150 feet; situated on the north slope of Parker Hill, Joe Davis district, six miles from Breckenridge; located in 1882; vein a contact four and one-half feet thick, pay streak two inches, containing gray copper and porphyry, assaying from 161 to 185 ounces silver per ton, developed by a fifty-five-foot shaft.

**Mammoth.**—Owned by R. J. Jones, Georgetown; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one-fourth mile from Decatur; located August 27, 1881; vein a fissure twenty-five feet

wide, with four pay streaks, twenty, three, five, and two inches in width, containing quartz, galena, and copper, assaying at grass roots from ten to twenty ounces silver per ton; developed by a fifteen-foot drift on the vein.

**Mammoth and Golden Shoe.**—Two claims, 150x1500 feet each; situated on the north slope of Coss Hill, one-half mile from Argentine; located in 1879, and in process of patent; owners J. C. Thompson and B. R. Moore, both Harrodsburg, Mercer County, Ky.; agent, T. E. Eastland, Argentine; veins both fissures three and twelve feet wide, pay streaks six and thirty-six inches, containing sulphurets in a quartz gangue, milling, when sorted, fifty-five ounces silver per ton; developed by seven shafts from ten to twenty-five feet in depth and one cross-cut 300 feet long, designed to cut both veins.

**Mammoth and Mayflower.**—Two claims, 150x1500 feet each; situated near Warren's Station, Beaver Dam district; located in 1879; owner J. V. Board, Warren's Station (Heywood P. O.); veins both fissures three feet wide each, containing a fair material; developments—one 250-foot cross-cut, designed to cut both veins at great depth.

**Mammoth No. 1 and No. 2.**—Two adjoining claims on the same vein, 150x1500 feet each; situated on the north-west slope of Teller Mountain, four miles from Montezuma, Snake River district; located in August and October, 1882; owners S. D. Stearnes, Argentine, and Fred. Harry, Montezuma; vein a fissure twelve feet wide, pay streak from six to thirty inches, containing quartz, gray copper, and galena, assaying fairly; developments—two twelve-foot shafts and one twelve-foot open cut.

**Manitoba.**—150x1500 feet; situated on the west slope of Cooper Mountain, three-fourths mile from Chihuahua, Peru district; located in December, 1881; owners Elias Smith and Thos. Porter, both Chihuahua, and A. O. Tennis, Boulder; vein a fissure eight feet wide, pay streak eight inches, containing quartz and galena, assaying sixty per cent lead and sixteen ounces silver per ton; developed by one thirty-five-foot shaft.

**Maretta.**—150x1500 feet; situated on the south slope of Kellcher Mountain, fourteen miles from Frisco, Wilkinson district; located in October, 1881; owners Jno. J. Frank, Joseph Stockham, James Kelleher, and Wm. H. Crawford, all Frisco; vein a fissure five feet wide, pay streak fourteen inches, containing gray copper and quartz, assaying from 75 to 100 ounces silver per ton; developed by one tunnel fifty feet long.

**Marion.**—150x1500 feet; situated on the west slope of McLellan Mountain, adjoining the Silver Ledge property, three miles from Decatur, Peru district; located in 1880; owner J. B. Hewitt, Decatur; vein a fissure four feet wide, pay streak eight inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and seventy ounces silver per ton; developed by one ten-foot shaft and one forty-five-foot drift on the vein.

**Mark Twain.**—150x1500 feet; situated on the south-west slope of Dianthe Hill, one-half mile from Argentine; located in September, 1880; owners Thos. E. Eastland and Chris. Dienst, both Argentine; vein a fissure three feet wide, pay streak from one-half to two inches, containing galena, sulphurets, and quartz, assaying from twenty to thirty ounces silver per ton; developments—two tunnels twenty-two and twenty-eight feet long and one sixteen-foot shaft.

**Mark Twain Extension.**—150x1500 feet; situated on the north slope of Glacier Mountain, one-half mile from Montezuma, Snake River district; located in July, 1882; owners Chas. Buckland and J. F. Willis, both Montezuma; vein a fissure five feet wide, pay streak fourteen inches, containing galena, gray copper, and black sulphurets, in quartz, milling, when sorted, forty-five per cent lead and 175 ounces silver per ton; developed by one drift ninety feet long, one shaft 100 feet deep, and other workings.



**Mark Twain Mining Company (The).**—Incorporated under the laws of Colorado, in January, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Geo. B. Wilkinson; vice-president, James Thatcher; secretary, Jos. F. Lamorelle; treasurer, Wm. F. Burrall Philadelphia, Pa.; general manager, Chas. Buckland, Montezuma; office 32 South Thirtieth street, Philadelphia, and at Montezuma; owns two claims, 150x1500 feet each, viz.: Mark Twain, located in August, 1881, and patented in August, 1882, and St. Andrews, located in July, 1882, and the St. Elmo tunnel site, 3000x6 feet, located in June, 1882; situated on the west slope of Glacier Mountain, one mile from Montezuma, Snake River district; vein a fissure twenty feet wide, pay streak from five to fifteen inches, containing black sulphurets, gray copper, and galena, in a quartz gangue, the first-class ore milling, when sorted, thirty per cent lead, $4 gold, and from 400 to 500 ounces silver, the second-class sixteen per cent lead and from 100 to 150 ounces silver, and the third-class sixteen per cent lead and from fifty to eighty ounces silver per ton; developments—one shaft ninety feet deep and three tunnels, 50, 90, and 120 feet long; and on the tunnel site a tunnel 160 feet long, cutting the Mark Twain vein at a depth of 560 feet, and other workings; improvements—ore-houses, shaft-houses, etc., and the property is making regular shipments.

**Mary B.**—150x1500 feet; situated on the west side of the Park Range, near Boreas, seven miles from Breckenridge, McBarnes district; located in 1880, and patented in 1882; owners B. M. Newcomb and R. F. Love, both Breckenridge, and W. E. S. Bunn, Peoria, Ills.; vein a fissure from three to six feet wide, containing porphyry, gray copper, and antimonial silver, assaying from 10 to 1,000 ounces silver per ton; developed by four shafts from twelve to twenty-five feet in depth and one thirty-foot tunnel.

**Maryland and Great American.**—Two claims, 150x1500 feet each; situated on the east side of French Gulch, three and one-fourth miles from Breckenridge, Bevan district; located in 1880; owned by a New York syndicate, represented at Breckenridge by E. Beach; veins both fissures forty inches wide each, pay streaks from four to twelve inches, containing mineralized quartz and galena, assaying from $5 to $20 in gold and from fifteen to thirty-five ounces silver per ton; developments—two tunnels 140 and 150 feet long and one fifty-foot drift.

**Matteson and Sailor Boy.**—Two claims, covering six and one-half acres; situated on the east slope of Jacque Mountain, one-eighth mile from Kokomo, Ten-mile district; located in June, 1879; owner Jno. N. Matteson, Kokomo; vein a contact twelve feet thick, with a lime foot-wall, on which the mineral (galena, iron pyrites, and lime-rock) appears, milling, when sorted, seventy-five ounces silver and a trace of gold per ton; developed by three tunnels, 195, 45, and 140 feet long, and other workings.

**Maud.**—Owned by George Puterbaugh, Breckenridge; claim 1500x150 feet; situated on the east base of Nigger Hill, three-fourths of a mile from Breckenridge; located in November, 1881; vein a horizontal contact nine feet thick, containing a free-milling gold porphyry, assaying from $20 to $30 per ton; developed by one seventeen-foot incline.

**Maud S.**—(See Little Bishop and Maud S. Group.)

**Maud S.**—Owned by G. W. Kesler and others, Decatur; claim 1500x150 feet; situated on the east slope of Silver Mountain, Peru district, one and one-

half miles from Decatur; located in June, 1881; vein a fissure five feet wide, pay streak seven inches, containing bismuth quartz, assaying 100 ounces silver per ton; developed by a ten-foot adit on the vein.

**Maximus.**—(See Colorado Land and Mineral Company.)

**May Belle.**—150x1500 feet; situated on the south slope of Collier Mountain, three-fourths mile from Montezuma, Snake River district, and located in June, 1880; owners J. A. Conwell, H. I. Robbins, and Fannie Sawtelle, all Montezuma; vein a fissure five feet wide, pay streak from two to five inches, containing galena and some quartz, assaying forty-two per cent lead and sixty-six ounces silver per ton; developed by one drift seventy feet long.

**May Vivian.**—Fractional claim, four acres; situated on the north slope of Red Peak, eight miles from Frisco, Wilkinson district, and located in January, 1882; owners Adolph Ballif and J. V. Brown, both Frisco; vein a fissure fifteen inches wide, containing quartz and gray copper, assaying fairly; developed by one ten-foot tunnel.

**Mayflower.**—Owned by William and Matthew Graff, both Kokomo, and Wm. Wilson, Denver; claim 1500x150 feet; situated on the east slope of Jacque Mountain, Ten-mile district, three-fourths mile from Kokomo; located in 1879, and patented in 1882; vein a contact four feet thick, containing sandstone, galena, and carbonates, assaying from twenty to sixty per cent lead and from 40 to 120 ounces silver per ton; developed by a tunnel 343 feet long, 150 feet of drifts, and other workings.

**Mayflower.**—150x1500 feet; situated on the south-east slope of Prospect Hill, one and one-fourth miles from Breckenridge, McKay district, and located in May, 1879; owners J. T. Anders, Denver, and Wiard Bros., Breckenridge; vein a contact three feet wide of magnetic iron, assaying forty per cent iron and some silver per ton; developed by 125 feet of tunneling and shafting.

**Mayflower Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1881; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, J. W. Sawyer; vice-president, John Wocher, Jr.; secretary and treasurer, H. C. G. Bals—all Indianapolis; general manager and superintendent, Major W. A. Mensch, Frisco; offices Frisco and at the Merchants' National Bank, Indianapolis; owns seven claims, 150x1500 feet each, viz.: Mida B., Helen S., and Eureka, situated at the head of Mayflower Gulch, four and one-half miles from Kokomo, Ten-mile district, and located in October, 1880; vein a fissure four feet wide, containing quartz carrying gold and silver, milling from five to twelve ounces silver and from three to thirteen ounces gold per ton; developed by two open cuts twenty-five and twenty-one feet long and one seventy-three-foot tunnel; Henry B. and Jane, situated on the south slope of Red Peak and at the head of Willow Creek, seven miles from Frisco, Wilkinson district, and located in June and July, 1881; vein a fissure three and one-half feet wide of quartz and galena, which assays ten per cent lead and from 50 to 500 ounces silver per ton; developments—one fifteen-foot open cut on each claim; and Granville and Little Gertrude, situated on the south-west slope of Argentine Mountain, three miles from Decatur, Peru district, and located in August, 1881; veins both fissures from two to four feet wide, the latter containing two pay streaks three and five inches wide of galena and quartz, assaying fifty per cent lead and seventy-five ounces silver per ton; developed by one twenty-seven-foot tunnel and one open cut.

**Me Too.**—(See Bonanza and Me Too.)



**Medina Group.**—Owned by D. L. Clancy, Chihuahua, and J. N. Roberts, Georgetown; group comprises the Medina, Colorado Chief, Denver, Golden Eagle, and Nellie lodes, 1500x150 feet each; situated on the south slope of Lenawee Mountain, Peru district, one and one-half miles from Chihuahua; located May 30, 1880; veins all fissures from two to six feet wide, pay streaks from six to eighteen inches, containing quartz, bismuth, and brittle silver, assaying four ounces gold and 150 ounces silver per ton; Medina developed by a forty-foot drift and an eighteen-foot shaft, Nellie by an eighteen-foot shaft and an eleven-foot shaft, Colorado Chief by a twenty-foot drift and a fourteen-foot shaft, Denver by an eighteen-foot open cut and a fourteen-foot shaft, and Golden Eagle by two fourteen-foot open cuts.

**Meily Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, L. M. Meily, Ohio; vice-president, A. Hansmann; secretary and treasurer, C. C. Parsons—both Leadville; offices 405 Harrison Avenue, Leadville; owns the Meily Group, sixteen claims, 1500x150 feet each; situated on Elk Mountain, Consolidated Ten-mile district, two miles from Kokomo; located in 1879 and 1880, and partially patented; veins probably fissures, from two to six feet in width, pay streaks from four to twenty-two inches, containing sandstone and galena, assaying from 50 to 100 ounces silver per ton; developed by the Monarch Tunnel 425 feet long, considerable drifting, and other workings.

**Melbourne.**—150x1500 feet; situated on the east slope of Ruby Mountain, two miles from Decatur, Peru district, and located in August, 1882; owner Susan Vincent, Denver; vein a fissure four feet wide, pay streak fifteen inches, containing galena and quartz; developments—one thirteen-foot shaft.

**Mendenhall Extension.**—150x1500 feet; situated on the north slope of Glacier Mountain, two and one-half miles from Montezuma, Snake River district; located in July, 1882; owners R. Snodgrass, Jno. McKenzie, and E. J. Stirling, all Leadville; vein a fissure six feet wide, pay streak from ten to fifteen inches, containing galena and quartz, assaying from $100 to $500 per ton; developed by an open cut fifteen feet long and a ten-foot tunnel.

**Mendota.**—150x1500 feet; situated on the west side of Silver Lake five miles from Breckenridge, Pollock district; located in June, 1881; owners S. C. Whipple, Breckenridge, and James Ferguson, Mendota, Ill.; vein a fissure seven feet wide, pay streak twelve inches, containing sulphurets, chlorides, yellow copper, and quartz, assaying from 50 to 150 ounces silver per ton; developed by a twenty-two-foot open cut, with a twenty-foot face.

**Mermaid.**—150x1500 feet; situated on Fletcher Mountain, four and one-half miles from Kokomo, Ten-mile district, and located in June, 1882; owners Arthur Chanute, W. L. Gibson, R. Cline, and E. R. Holden, all Leadville, E. J. McKitrick and W. J. Johnson, both St. Louis; vein a fissure varying in width, and containing quartz and galena carrying silver and gold, and assaying $50 per ton; developments—one ten-foot shaft and one ten-foot open cut.

**Meta.**—Owned by Wm. Elliot, Breckenridge; claim 1500x150 feet; situated on the east slope of Carbonate Hill, five miles from Breckenridge, and located in July, 1881; vein a vertical contact forty feet wide at the outcrop, containing quartzite and iron pyrites, assaying three ounces gold per ton; developed by a twenty-foot cross-cut tunnel; output twenty-five tons on dumps.

**Michigan Belle, Highline, G. B. Turner, and Companion.**—Four claims, 150x1500 feet each; situated in Garibaldi Gulch,

one-half mile from Rexford, North Swan district, and located in August, 1881; owners R. F. Williams, Edwin Rayder, and Peter and Albert Westfall, all Rexford, and George, William, Peter, and F. P. Fox, all Niles, Mich.; veins all fissures three feet wide each, pay streaks twelve inches, containing quartz and black sulphurets, assaying from one to ten ounces gold and from 40 to 450 ounces silver per ton; developed by one shaft 115 feet deep and one tunnel eighty-four feet long, designed to cut the veins in all the claims, and intersecting the Michigan Belle vein at a depth of 270 feet; improvements—two cabins, coal-house, blacksmith-shop, etc.

**Mida B.**—(See Mayflower Consolidated Mining Company.)

**Mills City.**—Owned by H. H. Brown and James M. Frutchey, both Breckenridge; claim 1500x150 feet; situated on the west slope of Brooks Hill, and adjoining the Little Keeley, one and one-half miles from Breckenridge; located June 28, 1882; vein a contact six feet thick, with two pay streaks fifteen and twenty inches, containing iron carbonates, assaying from ten to thirty ounces silver and from $5 to $15 in gold per ton; developed by a tunnel thirty feet long; improvements—shaft-house, etc.

**Milo Group.**—Owned by Wm. Gleason, Kokomo, Chas. L. Hall, Leadville, Dennis Sullivan, Denver, and J. A. Thatcher, Central City; group comprises the Milo, Greenville, and Elk Mountain, three fractional claims, covering 325x1500 feet; situated on the east slope of Elk Mountain, one mile from Kokomo, Ten-mile district; located in 1879, and patented in 1881; vein a contact averaging five feet in thickness, containing lead carbonates and galena in a decomposed gangue, milling, when sorted, forty per cent lead, forty ounces silver, and one-fourth ounce gold per ton; developed by one main incline 700 feet long, levels aggregating 2,000 feet, a 900-foot adit, and 1,000 feet of winzes and upraises; improvements—one shaft and ore house and one steam hoister, motive power supplied by a twenty-five-horse-power engine; output $250,000; present shipments about ten tons per day.

**Miner Boy.**—(See Clifton, Miner Boy, etc.)

**Mineral Hill Group.**—Consisting of Cassiopea, Andromeda, Balm of Gilead, and five other lodes, 150x1500 feet each; situated on the south slope of Mineral Hill, one-half mile west of Lincoln City, Bevan district; located in 1872, and in process of patent; owners J. J. Riethman, Denver, and Calvin P. Clark, Lincoln City; veins all vertical fissures from one to six feet wide, containing porphyry and galena, assaying from forty to fifty per cent lead and from ten to forty ounces silver per ton; developed by twenty shafts from ten to eighty feet in depth, and two tunnels sixty-five feet long each, one of which is designed to cut the veins in all the above claims.

**Mineral Hill Mining and Smelting Company (The).**—Incorporated under the laws of Pennsylvania, in 1880; general manager, L. E. Davis, Breckenridge; offices 333 Chestnut street, Philadelphia, and Breckenridge; owns the Little Daisy, Big Daisy, Dandy, and Boss lodes, 1500x150 feet each; situated on the south-west slope of Mineral Hill, two miles from Breckenridge, and in process of patent; vein a fissure from three to six feet, and pay streaks from six to twenty-four inches, containing galena in a porphyry gangue, milling, when sorted, from twenty-five to fifty ounces silver per ton; developed by one main tunnel 525 feet long, seven shafts from 30 to 150 feet in depth, and other workings; improvements—shaft-houses, ore-houses, etc.

**Mineral Hill Tunnel Company (The.)**—Incorporated under the laws of Indiana, in February, 1882; capital stock $2,500,000, in 250,000 shares of $10 each, non-assessable; president, R. Jackson; vice-president, S. D. Phillips; secretary, J. Pattison; treasurer, Jos. S. Hanna—all Lafayette, Ind.; superintendent, A. G. Hoopes, Breckenridge; offices Lafayette and Breckenridge; owns three claims 150x1500 feet each, viz.: Kentucky, Paducah, and Mattie, and one mill site of five acres; situated on top of Mineral Hill, three miles from Breckenridge; Paducah patented in 1882, and the others in process; veins all fissures from two to four feet wide, pay streaks from one to twenty-two inches, containing galena in a quartz gangue, worth $37.50 per ton on the dump, when sorted; developed by three shafts, forty, sixty, and thirty-five feet deep; and the Mineral Hill Tunnel site, 3000x9 feet, crossing the lode claims, and located in November, 1880; on which a tunnel is run 850 feet long, cutting the veins in the lode claims described and also in the Peoria, Buckeye, Lucky, Shamrock, and others.



**Mineral Point.**—150x1500 feet; situated on the south slope of Cooper Mountain, one mile from Decatur, Peru district, and located in August, 1880; owners Augustus Williams, J. A. Russell, J. D. McMaster, and T. J. Laney, all Decatur; vein a fissure five feet wide, through which is scattered galena, assaying from 50 to 100 ounces silver per ton; developed by one ten-foot shaft and one forty-foot tunnel.

**Minero Hambre.**—Owned by Wm. Tracy and Kasper Koeffel, both Chihuahua; claim 1500x150 feet; situated on the north slope of Collier Mountain, Peru district, one and one-half miles from Chihuahua; located July 21, 1882; vein a fissure three feet wide, pay streak eight inches, containing quartz and galena, assaying sixty-five per cent lead and eighty-five ounces silver per ton; developed by a forty-foot tunnel.

**Minnehaha.**—Owned by B. Jones, S. E. Edwards, Fred. P. Dewey, and others, Decatur; claim 1500x150 feet; situated on McClellan Mountain, Peru district, one and three-fourths miles from Decatur; located in 1879; vein a fissure four feet wide, pay streak from ten to twenty inches, containing galena and gold quartz, assaying sixty ounces silver and one and one-tenth ounces gold per ton; developed by a forty-one-foot adit on the vein.

**Minnesota Group.**—Three claims, viz., Minnesota, Little Frank, and Sun, 1500x150 feet each; owned by M. Theibedaux, Swan City; group situated on the north slope of Flat-head Hill, Swan district, one-fourth mile from Swan City; located in 1882; vein a contact from twelve to fourteen feet wide, pay streak about four feet, containing porphyry and galena, assaying from fifteen to thirty ounces silver per ton; developments—a shaft thirty-six feet deep, and other workings.

**Minnie.**—Owned by R. P. Spencer, John M. Mairs, Robert W. Foote, and Alonzo Rich, all Breckenridge, J. R. Martin, Arkansas, and —— Harris, Chicago; claim 1190x150 feet; situated on the crest of Mineral Hill, Bevan district, three and one-half miles from Breckenridge; located in 1879; vein a fissure four feet wide, pay streak from four to eighteen inches, containing galena in a porphyry gangue, milling, when sorted, sixty-eight per cent lead and forty ounces silver per ton; developed by a shaft 131 feet deep and an eighteen-foot drift from shaft, showing ten inches of solid mineral, and two other ten-foot shafts, exposing ore-reserves; improvements—shaft-houses, etc.; output fifty tons.

**Minnie B. Group.**—Three claims, viz., Minnie B., Minnie B. Extension, and Nellie H., 1500x150 feet each; owned by Samuel S. Lesher, and J. N. and Philip Weston, all Breckenridge; group situated on a spur of Mt. Geyot, Avalanche district, eight miles from Breckenridge; located July 11, 1881; veins all fissures varying in width, pay streak eighteen inches, containing porphyry, silver, and chlorides, milling, when sorted, $40 per ton; developed by a tunnel 110 feet long and a twenty-foot shaft.

**Minnie Florence.**—150x1500 feet; situated on Collier Mountain, one and one-half miles from Montezuma, Snake River district; located in March, 1882; owners Thos. Feeney, W. J. Lusher, and Jno. Roberts, all Montezuma; vein a fissure eight feet wide, pay streak from two to five inches, containing galena and bismuth silver in quartz, milling, when sorted, twenty-five per cent lead and fifty ounces silver per ton; developed by two tunnels 100 and 50 feet long, two levels 100 and 50 feet long, and one thirty-foot shaft, all showing mineral.

**Minnie Lee Gold and Silver Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1882; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, O. F. Woodruff; vice-president, J. B. Mason; treasurer, Frank Clendennin; manager, Warren Woods—all Morrison, Ills.; secretary, Harry E. Woods, Warren, O.; owns the Worcester, Parole, Ten Broeck, and Little Shirley, four claims, covering about twenty acres; situated on Gold Hill, three-quarters mile from Kokomo, Ten-mile district; located in 1878–9; all patented in 1881–2; veins all fissures from ten to fifty inches, containing galena and carbonates and iron oxides in a quartz gangue, milling, when sorted, $30 per ton; developed by seven shafts from twenty to ninety feet in depth and one forty-foot incline; improvements—two shaft-houses and one dwelling-house.

**Mississippi.**—300x1500 feet; situated on the north slope of Aiken Mountain, one mile from Rexford, Augusta district; located in June, 1880; owners Lambert Gleasen and John McWilliams, both Swan City, and J. H. Hall and John Ellen, both Denver; vein a fissure three feet wide, pay streak six inches, containing galena and quartz, assaying fifty per cent lead and thirty-seven ounces silver per ton; developed by one incline 100 feet deep, and other workings.

**Modoc.**—150x1500 feet; situated on the south slope of Collier Mountain, one and one-half miles from Montezuma, Snake River district, and located in 1874; owners George H. Bressler, Breckenridge, and Wm. Young, Montezuma; vein a fissure two feet wide, pay streak from four to eight inches, containing bismuth silver in a quartz gangue, milling, when sorted, from 150 to 200 ounces silver per ton; developed by one shaft seventy-five feet deep and one cross-cut 150 feet long.

**Moeltke.**—150x1500 feet; situated on the south slope of Kelleher Mountain, fourteen miles from Frisco, Wilkinson district, and located in February, 1882; owners John J. Frank, John Hunter, David McPherson, and Henry Stafford, all Frisco; vein a fissure four feet wide, pay streak from five to ten inches, containing gray copper and quartz, assaying from 100 to 1,000 ounces silver per ton; developed by one tunnel seventy-five feet long, and other workings.

**Mohawk.**—150x1500 feet; situated on the north slope of Teller Mountain, two and one-half miles from Montezuma, Snake River district, and located in July, 1882; owners John Sundrager and S. Brown, both Montezuma; vein a fissure twelve feet wide, pay streak five inches, containing galena and quartz, assaying sixty per cent lead and fourteen ounces silver per ton; developed by one shaft twenty feet deep.

**Mohawk.**—150x1500 feet; situated between Humbug and Iron Hills, ten miles north-east of Breckenridge, Swan district; located in January, 1881, and in process of patent; owners Henry Dennison, Elizabeth, N. J., and William Johns, Swan City; vein a contact (lime and porphyry walls) from ten to sixty inches thick, pay streak eight inches, containing free-milling quartz and some galena, assaying seven per cent lead, forty ounces silver, and some gold per ton; developed by two shafts fifty-five and twenty-three feet deep.



**Mohawk Girl.**—150x1500 feet; situated on the south slope of Eureka Mountain, one-half mile from Warren's Station, Bever Dam district; located in November, 1880; owner A. W. Folts, Warren's Station (Heywood P. O.); vein a fissure five feet wide, pay streak fourteen inches, containing galena, yellow copper, and quartz, assaying thirty ounces silver per ton; developed by two tunnels 115 and 60 feet long.

**Mollie.**—Owned by Patrick Ford and Richard Cantland, both Breckenridge; claim 1500x150 feet; situated on the west slope of Bald Mountain, four miles from Breckenridge, and located in June, 1879; vein a fissure from one to two feet wide, containing porphyry and galena, assaying from 50 to 125 ounces silver per ton; developed by a ninety-six-foot shaft.

**Mollie S.**—150x1500 feet; situated on the west slope of Tornado Peak, four miles from Frisco, Ten-mile district; located in March, 1881; owner V. J. Coyne, Frisco; vein a fissure fifteen feet wide, pay streak twelve inches, containing sulphurets, galena, and quartz, assaying forty ounces silver and some gold per ton; developed by one tunnel fifteen feet long.

**Monarch.**—(See Alta and Monarch.)

**Monroe.**—150x1500 feet; situated on the west slope of Keifer Mountain, four and one-half miles from Frisco, Ten-mile district; located July 9, 1882; owners C. C. Warren, Warren's Station (Heywood P. O.), Solon H. and Herbert L. Bushnell, both Rochester; vein a fissure five feet wide, pay streak sixteen inches, containing quartz, galena, and iron, assaying from fifty to seventy-five ounces silver per ton; developments—one ten-foot tunnel.

**Monster.**—Owned by Maurice Wolf and Chas. Pick, both Montezuma; claim 1500x150 feet; situated on the south-east slope of Teller Mountain, Snake River district, two and one-half miles from Montezuma; located in August, 1879; vein a fissure, varying in width, and containing quartz, galena, and native silver, assaying fifty per cent lead and from 50 to 750 ounces silver per ton; developed by a fifteen-foot shaft.

**Montezuma Silver Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $7,500,000, in 75,000 shares of $100 each, non-assessable; president, C. G. Francklyn; secretary and treasurer, E. E. Sheppard—both New York City; agent, superintendent, and manager, B. B. Lawrence, Montezuma; office 37 Wall street, New York City, and at Montezuma; owns thirteen claims, 150x1500 feet each, viz.: Chatauqua, Radical, Radical Jr., Erie, Erie East, Sciota, Itasca, Little Emma, Gen. Teller, Defiance, Dunkirk, No Name, and Francklyn (the first ten patented); situated on the west slope of Glacier Mountain, except Radical and Radical, Jr., on the east slope of Teller Mountain, all about three miles from Montezuma, Snake River district; veins all fissures from three to five feet wide, pay streaks from six to thirty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, forty per cent lead and from 50 to 150 ounces silver; developments—thirteen shafts from 15 to 200 feet in depth, and aggregating 500 feet, and 1,500 feet of drifting; improvements—air-compressors, boilers, etc., with the necessary buildings therefor, saw-mill, etc.

**Montreal and Little Pussy.**—Two claims, 150x1500 feet each; situated on the south slope of Fletcher Mountain, five miles from Recen, Ten-mile district; located in July, 1882; owners Henry Rock, Michelle Magger, and Maque Dagenai, all Recen; vein a fissure ten inches wide, containing galena and quartz, assaying fifty per cent lead and eleven ounces silver per ton; developed by one ten-foot shaft on each claim.

**Moore.**—(See C. W. Moore.)

**Moose.**—Owned by B. F. Bailey, David Peer, and J. P. Williams, all Decatur; claim 1500x150 feet; situated on the east slope of Horseshoe Mountain, Peru district, two miles from Decatur; located in 1882; vein a fissure three feet wide, pay streak from six to eighteen inches, containing quartz and galena, assaying fifty per cent lead and fifty ounces silver per ton; developed by a thirty-foot shaft.

**Mormon Chief.**—150x1500 feet; situated on the north slope of Collier Mountain, one-fourth mile from Chihuahua, Peru district; located in July, 1882; owners Isaac Filger, Joseph B. Poulson, and John Matthews, all Chihuahua; vein a fissure four feet wide, pay streak four inches, containing bismuth quartz, assaying seventeen ounces silver and a trace of gold per ton; developed by a ten-foot shaft.

**Morning Star.**—(See Kirksville and Morning Star.)

**Morning Star.**—150x1500 feet; situated on the east slope of Jacque Mountain, one-half mile from Kokomo, Ten-mile district; located in September, 1879, and in process of patent; owners W. E. Harwood, Kokomo, and Herman Beckurts, Louisville, Ky.; vein a fissure three feet thick, pay streak fifteen inches of quartz, carrying gold and carbonates, assaying seventeen per cent lead, one ounce gold, and twenty-five ounces silver per ton; developed by one forty-five-foot tunnel, one forty-foot winze, and one eighty-foot drift.

**Morning Star.**—150x1500 feet; situated on the east slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district; located in June, 1881; owners T. E. Clery, Charles Gerard, and George Frey, all Montezuma; vein a fissure eight feet wide, pay streak seven inches, containing quartz with pockets of sulphurets, assaying from 50 to 150 ounces silver per ton; developed by two tunnels eighty and eighteen feet long.

**Moss-back.**—Three acres; situated on Sheep Mountain, two miles from Kokomo, Ten-mile district; located in 1879, and in process of patent; owners T. A. Dickson, George S. Miller, and S. W. Howell, all Leadville, and J. W. Dilks, Kokomo; vein a fissure two feet wide, containing sandstone and galena, assaying thirty ounces silver per ton; developed by one seventy-foot shaft.

**Mount Royal Mining Company (The).**—Incorporated under the laws of Colorado, April 6, 1881; capital stock $500,000, in 50,000 shares of $10 each; president, B. F. Stickley, Leadville; secretary, Henry Learned, Frisco; treasurer and superintendent, Wm. Graff, Kokomo; assistant secretary, Wm. R. Hall, Leadville; owns Kittie Innes, Kittie Innes Extension, Snow-slide, Maenon, Avalanche, and Buffalo, 150x1500 feet each; situated at the junction of Keifer and Royal Mountains, two miles from Frisco, Ten-mile district; located from 1879 to 1881; veins all fissures from six to ten feet wide, pay streaks from ten to forty inches, containing quartz and black sulphurets, assaying one ounce gold and thirty ounces silver per ton; developed by two tunnels forty and twelve feet long and six open cuts from twelve to sixteen feet long.

**Mountain Chief.**—150x1500 feet; situated on the south-west slope of Collier Mountain, at Montezuma; located in March, 1882; owners J. F. Willis, John James, and Jesse Wilson, all Montezuma; vein a fissure five feet wide, pay streak six inches, containing galena and quartz, assaying 40 per cent lead and from 25 to 100 ounces silver per ton; developed by one forty-foot drift and one sixteen-foot shaft from bottom of drift.

**Mountain King.**—150x1500 feet; situated on the north slope of North Star Mountain, eleven miles from Breckenridge, Pollock district, and located in May, 1882; owners A. K. Stiles, Chicago, and E. L. Hyatt, Breckenridge; vein a fissure three feet wide, containing from eighteen to thirty-six inches of quartz carrying telluride, and assaying $75 per ton; developed by one twenty-foot tunnel.



**Mountain-lion.**—150x1500 feet; situated on the top of Humbug Hill, one and one-half miles from Lincoln, Avalanche district, and located in 1879; owners Geo. A. Blanchard, L. B. Wheeler, Fred. and Augustus Smith, and Henry Stall, all Lincoln; vein a vertical contact twenty feet thick, containing gold-bearing quartz; developed by one sixty-five-foot tunnel and three shafts from ten to fifteen feet in depth.

**Mountain-lion, Lucky, and Westfield.**—Three claims, 150x1500 feet each; situated on the west side of Crystal Lake, five miles from Breckenridge, Pollock district, and located in July, 1880; owners S. C. Whipple, Breckenridge, Geo. E. Tompkins and Henry Dodge, both Arlington, Ill., and the Spruce Creek Mining Company; veins all fissures about three feet wide each, containing quartz, sulphurets, chlorides, and galena; developed by three open cuts, twenty-five, twenty, and ten feet long, one on each claim.

**Mountain-top.**—Owned by J. P. Williams, Decatur, and David Allen and Susan Vincent, both Denver; claim 1500x150 feet; situated on the south slope of Argentine Mountain, Peru district, three miles from Decatur; located in July, 1881; vein a fissure eighteen inches wide, containing quartz and galena, assaying thirty per cent lead and from 25 to 120 ounces silver per ton; developed by a twelve-foot shaft and a twenty-two-foot tunnel.

**Muncie Girl Consolidated Mining Company.**—Incorporated under the laws of Colorado, in 1880; capital stock $100,000, in 10,000 shares of $10 each, non-assessable; president and treasurer, J. N. Templer; vice-president, John Gregory; secretary, T. S. Babb; superintendent, Theo. Winslow; office Rooms 17 and 18 Howell Block, Leadville; owns five claims, viz., Muncie Girl, Eaton, Princess, Mountain Treasure, East Lynne, and Western Union, 1500x150 feet each; situated on Bartlett Mountain, Ten-mile district, three miles from Robinson; located July, 1880; veins all fissures varying in width, and containing a quartz vein and gangue matter and a copper ore, assaying from 10 to 6,000 ounces silver per ton; developed by two tunnels 40 and 140 feet in length, a shaft fifty feet deep, and some drifting and other workings.

**Myrtle Annie.**—Owned by S. J. Mower, Breckenridge; claim 1500x150 feet; situated on the surface ground of Stilson Patch placer; located in 1877, and in process of patent; vein a fissure four feet wide, pay streak twelve inches, containing galena in a quartz gangue, milling, when sorted, thirty per cent lead and $50 per ton in silver and gold; developed by a thirty-six-foot shaft, a drift 650 feet long, and other workings; output five tons.

**Narragansett Mining Company (The).**—Incorporated under the laws of Colorado in January, 1883; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, H. P. Richmond; secretary and treasurer, John J. Fry—both Providence, R. I.; vice-president, J. H. Perry, Chicago; owns the Ida Bell and Bertie, two claims, 150x1500 feet each; situated on the north-west slope of Independence Mountain, five miles from Montezuma, Beaver Dam district; located in July, 1880, and in process of patent; vein a fissure varying in width, pay streak from ten to thirty inches, containing galena in a quartz gangue, milling, when sorted, forty-five per cent lead and forty-four ounces silver per ton; developed by three drifts, 69, 175, and 72 feet long, and other workings.

**Ned.**—G. E. Dollison, Alma, and G. W. Dollison, Golden; claim 1500 x150 feet; situated on the north side of Conger Gulch, one mile from Argentine, and located in September, 1879; vein a fissure four feet wide, pay streak from one to six inches, containing quartz carrying gold and silver, and assaying from one to four ounces gold and from 25 to 250 ounces silver per ton; developed by a thirty-five-foot shaft and two open cuts on the vein.

**Nellie D.**—150x1500 feet; situated on the south slope of Tucker Mountain, eight miles from Robinson, Ten-mile district, and located in March, 1881; owners A. Pohl, Robinson, and Ethel & Wicherham, Leadville; vein a fissure two feet wide of quartz and galena, assaying ten ounces silver per ton; developed by one shaft 125 feet deep and other workings.

**Nettie B. Group.**—Owned by G. W. Trimble and John W. Wallace, both Leadville; group comprises Nettie B., Tiger, and Forest, covering twenty and two-thirds acres; situated on Sheep Mountain, Ten-mile district, one-fourth mile from Robinson; located in 1878, and in process of patent; veins all contacts from two to six feet thick, containing sandstone and galena, assaying thirty per cent lead and from six to thirty ounces silver per ton; developed by a 200-foot incline, a cross-cut 100 feet long, and other workings.

**New Discovery Group.**—Owned by John and Theodore Spieles, James Ottenkirk, and R. Kinsell, all Decatur, and G. A. Domedion and Alexander Johnson, both Montezuma; group comprises New Discovery, Madison Extension, Grand Junction, Home-stake, Rialto, Rio, and San Pedro lodes, 1500x150 feet each; situated on the north slope of Decatur Mountain, Peru district, three-fourths of a mile from Decatur; located from July to September, 1880; veins all fissures from ten to fifteen feet in width, pay streaks from six to eighteen inches, containing galena, gray copper, and sulphurets, assaying from 50 to 750 ounces silver and a mill-run of sorted ore from the New Discovery yielding $111 per ton; developed by eight drifts from twenty to thirty feet in length and one main cross-cut 350 feet long, designed to intersect all the veins.

**New Erie, Nos. 1, 2, and 4.**—Three claims, 150x1500 feet each; situated on the north slope of Bear Mountain, adjoining the Warrior's Mark, six miles from Breckenridge, and located in June, 1881; owners R. F. Williams, Edwin Rayder, and Peter and Albert Westfall, all Rexford, and Geo., Wm., Peter, and F. P. Fox, all Niles, Mich.; veins all vertical fissures varying in width, and containing quartz and gray copper, assaying from one-tenth to two-tenths ounces gold and from five to twelve ounce silver per ton; developed by three shafts, one on each claim, fifty-five, thirty-eight, and thirty-five feet deep.

**New York and Brooklyn Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; president, E. B. Litchfield, New York City; secretary and treasurer, E. Litchfield, Breckenridge, Colo.; offices 47 Exchange Place, New York, and at Breckenridge; owns the Laurium Group, three claims, viz., the Laurium, West Laurium, and Brooklyn, 1500x150 feet each; situated on the west slope of Nigger Hill, two and one-half miles from Breckenridge; vein a vertical contact from one to eight feet wide, containing a gold and silver bearing porphyry, milling, when sorted, from $50 to $75 per ton (principally gold); developments—one main tunnel 500 feet long, with a drift therefrom 250 feet long, and other workings.

And owns a stamp-mill at the mines, containing fifteen Stamps and other machinery, with the necessary steam motive power, ore-houses, boarding-houses, etc.

**New York Clipper.**—Owned by G. A. Domedion, Montezuma, and H. J. Domedion, Wm. Sawtelle, and Chas. Miller, all Decatur; claim 1500x150 feet; situated on the south slope of Cooper Mountain, Peru district; located in January, 1880; vein a fissure seven feet wide, pay streak six inches, containing quartz and galena, assaying from 25 to 150 ounces silver per ton; developed by a twenty-two-foot shaft.



**New York and Colorado Mining Syndicate and Company.**—(See Chaffee County); owns the Venus (patented), Crescent, Silver Medal, Ready Pay, Whale Extension, Victor, Micawber, and Pickwick, 1500x150 feet each, and Doon, 3000x50 feet; situated on Teller Mountain, Snake River district, four miles from Montezuma; veins all fissures from two to twelve feet in width, containing galena and gray copper in a quartz gangue, and yielding fairly; developed through the Cashier and Champion tunnel; (see Cashier and Champion Mining Company).

**New York and Summit County Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1882; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Capt. Henry Dennison, Elizabeth, N. J.; vice-president, Abel Dennison; secretary, W. P. Edwards; treasurer, C. B. Payne—all Brooklyn, N. Y.; superintendent, Wm. Johns, Swan City; offices 5 and 7 Dey street, New York, and Swan City; owns two lode claims, viz., New Discovery and Sue; two placers, viz., Alice and Nellie, and a mill site, the Domie, covering about ninety-five acres; situated on the Georgia Gulch slope of Brewery Hill, Swan district, ten miles north-east of Breckenridge; located in August, 1881, and patented in October, 1882; veins all vertical contacts (porphyry and lime walls), from one to twelve feet wide, pay streaks from twelve to fourteen inches, containing a free-milling gold quartz, galena, iron, and copper, in a porphyry gangue, assaying ten per cent copper, thirty-five per cent lead, $5 to $10 gold, and 37 to 108 ounces silver per ton; developments—seventeen shafts from 10 to 310 feet in depth, one tunnel (on the Sue and known as the Sue tunnel) 315 feet long, a cross-cut 125 feet long, a sixty-foot discovery shaft, and a seventy-two-foot incline (both on the New Discovery), and another fifty-two-foot shaft; improvements—two blacksmith shops and a substantial dwelling-house.

**New York Tunnel.**—150x1500 feet; situated on the south slope of Sheep Mountain, one-fourth mile from Robinson, Ten-mile district, and located in June, 1881; owners John A. Hall, Jr., E. L. Hall, E. Shaver, O. C. Frisbie, W. S. Baldwin, Geo. McCloskey, and Neil McGonigle, all Robinson, and John C. Meagher, Leadville; vein a contact fourteen inches thick, containing galena and lime quartz, yielding fairly; developed by a tunnel 250 feet long and a ten-foot cross-cut.

**Newport Tunnel.**—Owned by W. H. Corbit and Sherry Garton, both Rexford; tunnel is driven 100 feet, and is designed to open up the veins in the Hope, Iowa, and Crystal lodes, 1500x150 feet each; situated on the east slope of Rexford Mountain, North Swan district, one-fourth mile from Rexford; located in August, 1880; veins all fissures averaging four feet in width, pay streaks from five to ten inches, containing quartz, galena, chlorides, and sulphurets, assaying from 75 to 100 ounces silver per ton; developed by three shafts, one on each claim, from ten to thirty feet in depth, in addition to the tunnel.

**Nigger Hill Group.**—Ten claims, 150x1500 feet each, viz., Sylvan Nos. 1, 2, 3, and 4, Modoc Nos. 1, 2, 3, and 4, Clara B. Nos. 1 and 2; situated on the south slope of Nigger Hill, four miles from Breckenridge, and located in April, 1883; owners J. S. Keator, Moline, Ill., H. G. Sayles and Eugene Owens, both Breckenridge; veins all fissures (porphyry walls) from twelve to thirty-six inches in width, containing gold-bearing quartz and porphyry, assaying from $10 to $12 per ton in gold, and galena and carbonates assaying from

$25 to $50 per ton; developed by twenty shafts from ten to sixty-five feet in depth, and good road to property.

**Nigger Property.**—(See Horseshoe Mining Company.)

**Ninety-three Group.**—Six claims, 150x1500 feet each, viz., Ninety-three, Washington, Seymour, Magnolia, Tucker, and Ketchum; situated on Copper Mountain, three miles from Kokomo, Ten-mile district, and located in 1879; owners G. W. Lindgreen and B. F. Follett, both Kokomo; vein a contact four feet wide of porphyry and carbonates, assaying from 5 to 100 ounces silver per ton; developed by three tunnels, 200, 60, and 100 feet long, one thirty-foot open cut, and one fifteen-foot shaft.

**No. 4.**—(See Lizzie May and No. 4.)

**North Star.**—Owned by T. E. Clery, Montezuma; claim 1500x150 feet; situated on the south-west slope of Collier Mountain, Snake River district, and located in August, 1875; vein a fissure six feet wide, pay streak from six to forty inches, containing galena in a quartz gangue, milling, when sorted, fifty per cent lead and from 50 to 400 ounces silver per ton; developed by two drifts on the vein fifteen and fifty feet in length and a series of openings on the vein from ten to thirty feet in depth.

**North Star Group.**—Owned by Chas. H. Oatey, John McCabe, and Wm. Fisher, all Chihuahau, and W. B Brooks, Colorado Springs; group comprises North Star, New York, and Pride of Lenawee lodes; situated on the south-west slope of Lenawee Mountain, Peru district, one mile from Chihuahua; located April 15, 1882; veins all fissures three feet in width, pay streaks from four to eight inches, containing quartz, galena, gray copper, and black sulphurets, assaying thirty per cent lead and from 50 to 500 ounces silver per ton; developed by a cross-cut tunnel 230 feet long, cutting the North Star vein, and designed to cut the New York and Pride of Lenawee at depths of 200 and 350 feet, and two shafts thirty and fifteen feet in depth.

**Noonday Sun.**—150x1500 feet; situated on the north side of McCullough Creek, eight miles south-west of Breckenridge, and located in October, 1879; owners Calvin P. Clark, Lincoln City, and L. R. Wilson, Louisville, Boulder County; vein a fissure twenty-five feet wide, containing quartz, galena, iron, and copper, assaying $28 per ton; developed by one tunnel twenty-eight feet long.

**Nutria Mining Company (The).**—Incorporated under the laws of Colorado; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president, Henry H. Roelofs, Philadelphia; vice-president, Allen Jewett, St. Louis; secretary, Wm. H. Patrick, Leadville; treasurer and superintendent, J. A. McCune, Kokomo; offices 150 West Sixth street, Leadville, and Kokomo; owns the Maud S., Eclipse, Flag-staff, Snow-bird, Wellington, Black Bess, Seven-Thirty, and Mountain Flower lodes, 1500x150 feet each; situated on the north-east slope of Elk Mountain, Ten-mile district, one and one-half miles from Kokomo, and located in January, 1881; veins all contacts from two to five feet in thickness, containing carbonates in a decomposed gangue, milling, when sorted, forty-four per cent lead and forty ounces silver per ton; developed by two shafts 70 and 134 feet in depth, and other workings.

**O. B. J.**—Owned by A. H. Grisham and Theo. Pankurst, both Breckenridge; claim 1500x150 feet; situated on the north slope of Fletcher Mountain, seven miles from Breckenridge, Pollock district, and located in July, 1882; vein a contact from six to seven feet in width, seamed with iron carbonates, and developed by a seventeen-foot shaft.



**Oakland Mining and Prospecting Company (The).**—Incorporated under the laws of Colorado, in March, 1880; capital stock $250,000, in 25,000 shares of $10 each, non-assessable; president, G. M. Gunderson; vice-president, F. C. Bishop; secretary, C. H. Buchanan; treasurer, J. N. Buchanan; office 184 Dearborn street, Chicago, and at Kokomo and Leadville; owns four claims, 150x1500 feet each, viz.: D. P. S., G. M. S., J. E. S., and N. C. G.; situated on the north slope of Mount Quandary, six miles from Kokomo, Ten-mile district; located in July, 1880; vein a fissure thirty inches wide, pay streak from three to six inches, containing galena and quartz, carrying silver and gold, assaying $50 per ton; developments—three tunnels, twenty, fifteen, and fifteen feet long, respectively, and one fifteen-foot open cut.

**Oatey.**—Owned by Chas. H. Oatey and Andrew Villneve, both Chihuahua; claim 1500x150 feet; situated on the south-west slope of Lenawee Mountain, Peru district, one-fourth mile from Chihuahua; located in 1879; vein a fissure two and one-half feet in width, pay streak from six to twelve inches, containing quartz, galena, black sulphurets, and gray copper, assaying forty per cent lead, 50 to 500 ounces silver, and ten pennyweights gold per ton; developed by one forty-five-foot shaft.

**Occidental.**—Owned by H. G., H. L., and J. L. Detwiler, all Breckenridge; claim 1500x150 feet; situated on the south side of the Blue River, one-half mile west of Quandary and nine miles south of Breckenridge; located in June, 1882; vein a fissure two feet wide, pay streak two inches, containing gold and silver quartz; developed by a fifteen-foot incline.

**Occidental and Ajax.**—Owned by Thos. H. Martin and C. B. Brown, both Chicago; superintendent, James Peck, Decatur; claims 1500x150 feet each; situated on the south slope of Ruby Mountain, at Decatur, Peru district; located in 1881; veins both fissures, six and four feet in width pay streaks from three to fifteen inches, containing quartz and galena, assaying from 30 to 200 ounces silver per ton; developed by two cross-cuts 50 and 130 feet in length, two levels fifty feet long each, and a tunnel 100 feet long, designed to cut the veins at great depth.

**Ohio.**—Owned by V. F. Neis, Geo. and E. Brocius, and James Daley, all Kokomo; claim 1500x150 feet; situated on the south-west slope of Gold Hill, Ten-mile district, one and one-half miles from Kokomo; located in 1880; vein a contact five feet thick, containing sandstone, galena, and carbonates, assaying sixteen ounces silver per ton; developed by a shaft fifty-three feet deep and a forty-eight-foot drift.

**Ohio and Duplicate.**—Owned by A. L. and Daniel Shock, both Breckenridge, and M. B. Carpenter, Denver; claims 1286x150 feet each; situated on the east slope of Shock Hill, three-fourths mile from Breckenridge; located in May, 1879, and Ohio in process of patent; vein a contact twenty-five feet thick, seamed with quartz and carbonates, milling, when sorted, from $100 to $300 per ton in silver and gold; developed by two tunnels 100 and 125 feet in length, ten shafts from ten to thirty feet in depth, and other workings; improvements—ore-houses, blacksmith-shop, etc.; output from 50 to 100 tons shipped, one car-load of which yielded over eleven ounces gold per ton and twelve ounces silver.

**Old Reliable and Tunnel.**—Owned by D. B. Perkins and J. Hildebrand, both Lincoln City; claims 1500x150 feet each; situated on the south slope of Humbug Hill, Avalanche district; located in March, 1879; veins both fissures nine feet in width, containing quartz, galena, and iron pyrites, assaying $60 per ton; developed by a cross-cut tunnel 190 feet long and a sixty-foot drift.

**Old Republic.**—150x1500 feet; situated on the north slope of Lake Point, one and one-half miles from Rexford, North Swan district; located in July, 1882; owners W. H. Shaw, Henry Braden, and Danl. Patrick, all Rexford; vein a fissure three feet wide, pay streak fourteen inches, containing quartz carrying gold, silver, and copper, assaying from $60 to $90 per ton; developed by one ten-foot shaft.

**Old Settler and Chamberlain.**—Two claims, 50x1400 and 50x3000 feet; situated on the west slope of Collier Mountain, one-fourth mile from Montezuma, Snake River district; located in July, 1866; owners Oliver Milner and E. L. Doyle, both Montezuma, and Geo. W. Smith, Lafayette, Ind.; vein a fissure (traceable on the surface for 3,000 feet) five feet wide, pay streak from eighteen to twenty-four inches, containing iron sulphurets, zinc blende, galena, and quartz, milling, when sorted, from $10 to $15 per ton; developed by two adits, one on each claim, 220 and 100 feet long, respectively, one cross-cut 450 feet long, designed to cut both veins, and other workings.

**Old-timer.**—Owned by H. I. Robbins, R. C. Benight, and Geo. Van Dyke, all Montezuma, and J. S. Gates, Georgetown; claim 1500x150 feet; situated on the east slope of Glacier Mountain, Snake River district, one-half mile from Montezuma; located May 12, 1881, and patented December 10, 1881; vein a fissure eight feet wide, pay streak from six to twelve inches, containing galena and native and ruby silver in quartz, milling, when sorted, thirty per cent lead and from 100 to 225 ounces silver per ton; developed by two levels, 200 and 107 feet in length, and other workings; improvements—ore-house, etc.; output twenty-five tons.

**Old Tom and Thread-me-not.**—Two claims, 150x1500 feet each; situated at the head of Searl's Gulch, and on the south slope of Jacque Mountain, one and one-half miles from Kokomo, Ten-mile district; located in 1880; owners Hynes & Dowd, Gust. Gamer, James Brooks, and Charles Gratton, all Kokomo; vein a contact ten inches thick of iron pyrites, gray copper, and quartz, carrying silver; developments—one incline 190 feet long, and other workings.

**Olive.**—(See Flint Mining and Smelting Company.)

**Omaha.**—150x1500 feet; situated in Brown's Gulch, five and one-half miles from Breckenridge, Bevan district; located in February, 1880; owner P. D. Mickel, Breckenridge; vein a fissure five feet wide, pay streak from two to six inches, containing galena and porphyry, assaying twenty ounces silver per ton; developed by 200 feet of tunneling.

**Omaha and Hukill.**—Two claims, 150x1500 feet each; situated on the north side of Spruce Creek, six miles from Breckenridge, Pollock district; located in October, 1880; owners A. H. Solomon, George Goodier, and Julius Bond, all Breckenridge; vein a fissure eighteen inches wide of silver-bearing quartz, assaying fifty ounces silver per ton; developed by one fifty-foot shaft and one forty-foot drift.

**Ontario.**—150x1500 feet; situated on the Hoosier Pass spur of North Star Mountain, Pollock district, and located in June, 1881; owners Archie McDonald, Jr., and D. J. K. McDonald, both Alma; vein a fissure seven inches wide of carbonized matter, carrying gold and silver, assaying $50 per ton; developments—one shaft fifty-eight feet deep.

**Ontario, Humbug, and Comet.**—Three claims, 150x1500 feet each; situated on the north slope and top of Humbug Hill, one mile from Lincoln, Avalanche district, and located in 1879, 1880, and 1881, respectively,



owners Timothy Murphy, Patrick McCarty, and Henry J. Litten, all Lincoln; veins all contacts (porphyry and slate walls) from three to twenty feet thick, containing gold and silver bearing quartz, yielding well; developments—on Ontario one shaft seventy-five feet deep and three drifts, eighty, twenty-five, and twenty feet long, and on the other two claims one twenty-five-foot shaft each; output 300 tons.

**Ontario Tunnel.**—Owned by Walter G. Haines and Andrew Hanson, both Kokomo, and R. W. Fleming, Denver; site 3000x6 feet; situated on the south-west slope of Gold Hill, Ten-mile district, and located in 1880; on which a tunnel is driven 432 feet, cutting two veins, on which two locations have been made, viz., Belle and Huron, 1500x150 feet each; veins both fissures from two to four feet in width, containing quartz and galena, assaying twenty ounces silver per ton; additional developments—189 feet of drifting from the tunnel on the Huron lode, and other workings.

**Ophir.**—150x1500 feet; situated on the top of Sheep Mountain, three and one-half miles from Robinson, Ten-mile district; located in February, 1879, and patented in October, 1881; owners Jno. A. Hall, Jr., Jno. C. Meagher, C. B. Gentry, A. B. Mayfield, J. Brown, and L. G. Barrett; vein a contact three feet wide, pay streak from six to fifteen inches of silver-bearing quartz and galena, milling, when sorted, thirty-five per cent lead and forty-five ounces silver per ton; developed by one seventy-five-foot incline, and other workings.

**Orient and Old Constitution.**—Two claims, 150x1500 feet each; situated on the south slope of Kelleher Mountain, ten miles from Frisco, Wilkinson district; located in June, 1882; owners E. G. Stiles, Chicago, and James W. Allen and W. W. Moore, both Lincoln City; vein a fissure four feet wide, pay streak twenty-two inches, containing silver-bearing quartz; developed by two open cuts with twenty-foot faces.

**Orleans.**—150x1500 feet; situated on the west slope of Keifer Mountain, five miles from Frisco, Ten-mile district; located in February, 1882; owners Solon H. and Herbert L. Bushnell, both Rochester, and C. C. Warren, Warren's Station (Heywood P. O.); vein a fissure four feet wide, containing quartz, galena, and iron; developments—one ten-foot open cut.

**Orphan Boy Mining Company.**—Incorporated under the laws of New York; president, C. A. Spencer; secretary, C. S. Barber; treasurer, F. B. Foreman—all New York City; superintendent, W. J. Murray, Breckenridge; offices New York and Breckenridge; owns the following claims: Orphan Boy, Emma Barber, and two other lodes, 1500x150 feet each; situated at the base of Bald Mountain, McBarnes district, seven miles south-west of Breckenridge; located in 1881; veins probably fissures, from two to eight feet in width, pay streaks about two inches, containing gray copper in a porphyry gangue, milling, when sorted, from 400 to 1,200 ounces silver per ton; developed by an incline 180 feet long on the Orphan Boy, and other workings.

**Orphan Boy Silver Mining Company (The).**—Incorporated under the laws of Illinois, in March, 1880; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Chas. D. Rhodes; vice-president, Frank B. Hines; secretary, J. S. McKenney; treasurer, Thos. H. Martin—all Chicago; office Decatur; owns six claims, 150x1500 feet each, viz.: Orphan Boy, Pittsburgh, Independence, Wopsey, Snow-bank, and Della; Orphan Boy in process of patent, the others located in 1880; situated on the east slope of Collier Mountain, two miles from Decatur, Peru district; veins all fissures from ten to fifteen feet wide, pay streaks from ten to thirty inches, containing quartz and galena, assaying thirty-five per cent lead and from ten

to forty ounces silver per ton; developments—on the Orphan Boy one drift 150 feet long and on the others assessment work, and one tunnel 125 feet long designed to cut all the veins.

**Ossinning Group.**—Owned by Wm. Bemrose and J. W. Evans, both Alma, and Henry M. Bostwick, Denver; group comprises three claims, viz.: Ossinning, Cato, and Kaiser, 1200x150 feet each; situated on the east slope of North Star Mountain, Pollock district, nine miles from Breckenridge, and located in 1879; veins all fissures averaging three and one-half feet in width, containing gold quartz, assaying from one to one and one-half ounces gold per ton; developed by five shafts fifteen feet deep each and three open cuts ten feet long each.

**Ouray Discovery and Mining Company.**—(See Lake County); owns a three-fourths interest in the French and Clara and a one-half interest in the Little Annie lodes; situated on Jacque Mountain, one mile from Kokomo, Ten-mile district; located in April and May, 1879, and patented; on which considerable work has been done, showing a material assaying from $25 to $400 per ton; and a one-half interest in the Tucker placer (twenty acres); located May 17, 1879; situated at the base of Jacque Mountain, adjoining the French and Clara lodes; improvements—one frame building; a one-half interest in the Ora Cash, Montana, Mountain Jack, and Last Hope lodes; located in June, July, and August, 1880; situated on the Searl's Gulch slope of Jacque Mountain, one mile west of Kokomo; and a one-half interest in the Holy Cross, Little Contact, and Eagle lodes; located in July and August, 1880; situated on the south slope of Sheep Mountain, one and one-half miles from Robinson; the developments on the seven claims consisting of assessment work, and all showing a well-defined contact, warranting further work; a one-half interest in the Ida and Alice, St. Vrain's, Rio Grande, and Kirk placers, 160 acres each; located October 7, 1880; situated on the west fork of Ten-mile Creek, near Wheeler, about eight miles from Kokomo; covered with fine timber, and developed by assessment work; a one-fourth interest in the Williams and Bed-rock placers (see Williams and Bed-rock Placers); a one-eighth interest in the Beaver placer (160 acres); located June 11, 1880; a one-half interest in the Brown, Cyphert, and Miller placers (160 acres each); adjoining the Williams placer and extending to the head of Brown's Gulch; located October 23, 1880, and in process of patent; valuable for placer-gold deposits and timber; and a one-eighth interest in the Muggins and Keystone placers (160 acres each); located June 12, 1880; situated at the head of Muggins Gulch, on the north side of the Swan River; valuable for mineral and a heavy growth of timber; developments—assessment work.

**Pacific and Silver Lakes.**—Owned by Wm. Bemrose and Geo. W. Brunk, both Alma; claims 1500x150 feet; situated on ; the crest of North Star Mountain, Pollock district, seven miles from Alma located in 1876, and patented in 1879; veins both fissures from five to eight feet in width, containing gold bearing quartz, milling, when sorted, from $25 to $30 in gold per ton; developed by a tunnel forty feet long, two fifty-foot open cuts, a fifteen-foot shaft, and other workings; output fifty tons.

**Parnell.**—150x1500 feet; situated on the east slope of Sheep Mountain, at Robinson, Ten-mile district, and located in 1880; owners Hynes & Dowd and R. Morrison, all Kokomo, and L. R. Hill, ———, S. C.; vein a fissure varying in width, and containing galena in a sandstone gangue; developments—one tunnel fifty feet long.

**Parole Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, W. R. Robinson; secretary and treasurer, D. F. Carmichael—both Denver; vice-president, C. D. Moore; manager, E. B. Moore—both Robinson; offices 256 Curtis street, Denver, and at Robinson; owns seven claims, 150x1500 feet each, viz.: Parole, Albany, A. F. R., Ætna, Lawrence Belle, Douglass, and Cohensey; located in June, 1879; Parole, A. F. R., and Cohensey patented in 1881, and others in process of patent; situated on the north slope of Chalk Mountain, one and one-half miles from Robinson, Ten-mile district; vein a contact three feet thick, containing galena in decomposed granite, milling, when sorted, ten per cent lead and twenty-six ounces silver per ton; developments—on the Parole one compartment shaft 225 feet deep, worked by hoister and steam pump, on Albany one seventy-five-foot tunnel and one twenty-foot shaft, on A. F. R. one sixty-foot shaft, on Ætna one forty-foot shaft, on Lawrence Belle one fifty-foot shaft and one thirty-foot tunnel, and on Douglass a twenty-five-foot tunnel.



**Patrick Henry.**—150x1500 feet; situated in Gold Run Basin, one-fourth mile from Preston, Union district; located in March, 1880; owners D. J. Thompson, Michael Reese, and J. J. Nelson, all Preston, and R. A. Sankey-Breckenridge; vein a fissure forty inches wide, pay streak five inches, containing galena and porphyry, assaying from fifteen to forty-five per cent lead and from twenty to thirty ounces silver per ton; developed by one tunnel forty feet long and one twenty-foot shaft.

**Pauline.**—(Extension of Eclipse); owned by J. F. Willis, Montezuma; claim 1500x150 feet; situated on the east slope of Glacier Mountain, Snake River district, two miles from Montezuma; located in February, 1879; vein a fissure ten feet wide, pay streak from six to eight inches, containing galena and sulphurets in quartz, milling, when sorted, fifteen per cent lead and 500 ounces silver per ton; developed by two forty-foot shafts, one seventy-five-foot drift, and other workings, exposing large ore-reserves.

**Paxton Group.**—Six claims, 150x1500 feet each, viz., Kansas, Texas, Muncy, Harwood, Wyoming, and Susquehanna; situated on the north slope of Nigger Hill, one and one-fourth miles from Breckenridge; located in 1880; owners Chas. Paxton, Thos. C. and Jno. H. Abbett, Jno. McNish, and E. L. Baker, all Breckenridge; veins all contacts from one to four feet thick, pay streaks from ten to twenty inches, containing porphyry and galena, assaying twenty ounces silver per ton; developed by six shafts, one on each claim, from fifteen to twenty-five feet in depth.

**Pay-roll Group.**—Comprising Pay-roll, Stand-by, and Cross Extension lodes; owned by Thomas F. Poinsett, J. D. Vaughan, and Charles E. Jones, all Breckenridge; claims 1500x150 feet each; situated on the west slope of Mt. Quandary, twelve miles from Breckenridge; located in 1882; veins all fissures from four to eight feet in width, pay streaks from four to twelve inches, containing galena, gold quartz, and copper pyrites, assaying thirty per cent lead, twenty-five to fifty ounces silver, and one to three ounces gold per ton; there is another vertical quartz vein on the Pay-roll about two feet wide; developments—one fifteen-foot tunnel on the Pay-roll and assessment work on the others.

**Pay-master Mining Company (The).**—Incorporated under the laws of Maine, in 1881; capital stock $500,000, in 500,000 shares of $1 each, non-assessable; president, Thos. Appleton; secretary and treasurer, L. A. Bigelow; general manager, H. M. French—all Boston; office 63 Equitable Building, Boston, and at Decatur; owns the Pay-master (Capt. Jacque) group of mines, three adjoining claims on the same vein, 150x1500 feet each, viz., Pay-master, Silver Ball, and Seven-thirty; situated on the south slope of Gray's Peak, two miles from Decatur, Peru district; located in 1879, and patented in 1881; vein a fissure, at depth of eighty feet from five to six feet wide, contain-

ing quartz and galena, milling thirty-four per cent lead and thirty ounces silver per ton; developments—one eighty-foot shaft, 100 feet of drifts, and other workings; also one tunnel site, 3000x6 feet, on which there is a fifty-foot tunnel, designed to cut the above described vein 300 feet deep.

And owns a concentrating-works; situated on a five-acre mill site, adjoining the mines; building 50x55 feet, and three stories high, containing Blake Crusher, Cornish Rolls, Jigs, Rittinger Tables, etc.; motive power supplied by a fifty-horse-power engine and ample boiler; capacity forty tons per day. The mill is 1,300 feet from the mine, to which power for hoisting is transmitted by means of a steel-wire rope, the same being used to convey the products of the mine to the mill, this appliance working so well that the cost of mining and treating the ore is reduced to nearly $4 per ton.

**Pea-vine and Ida Alice.**—Two claims, 150x1500 feet each; situated on Boulder Creek, twenty miles from Frisco, Wilkinson district; located in July, 1881; owners V. J. Coyne, Harry Evans, J. V. Brown, Adolph Ballif, and T. P. Kent, all Frisco; veins both fissures, in the former from six to thirty inches wide, containing sulphurets, galena, quartz, and some leaf silver and copper, assaying from 100 to 200 ounces silver and one-fourth ounce gold per ton; in the latter six inches wide of quartz, carrying native and brittle silver and native copper, assaying very highly in silver; developed by two tunnels twenty feet long each.

**Peavy.**—(See C. A. Peavy.)

**Peerless and Boys.**—Owned by Eugene Owens, A. A. Shaffer, and Wm. Strohm, all Breckenridge; claims 1500x150 feet each; situated on the south slope of Iowa Hill, one mile from Breckenridge, and located in January, 1882; vein a vertical contact from five to ten feet wide, containing gold and silver quartz and chlorides, assaying from $25 to $75 per ton; developed by a sixty-foot shaft and two open cuts twenty and forty-five feet in length.

**Peerless Mining Company (The).**—Incorporated under the laws of Colorado in 1882; capital stock $1,000,000, in 20,000 shares of $50 each, non-assessable; president, Calvin De Wolf, Chicago; vice-president, Louis B. Harding, Conn.; secretary and treasurer, Wallace DeWolf, Chicago; manager, L. D. Kneeland, Kokomo; offices Room No. 7, 184 Dearborn street, Chicago, and Kokomo; owns the Peerless, Matchless, and Smuggler lodes, 1500x150 feet each; situated on Fletcher Mountain, Ten-mile district, five miles from Kokomo; located in 1879 and 1880, and patented in 1881; veins both fissures twenty-five and fifteen feet in width, pay streaks from six to twenty-two inches, containing sulphurets in a sandstone gangue, milling, when sorted, from 50 to 200 ounces silver and one ounce gold per ton; developed by two shafts thirty and fifty-five feet in depth, two tunnels 50 and 100 feet in length, and other workings; output thirty tons; and owns a five-sixth interest in the Alleghany lode, adjoining the above group.

**Pembina.**—150x1500 feet; situated on the south slope of Cooper Mountain, one mile from Chihuahua, Peru district, and located in 1880; owners B. Zemansky, Georgetown, and John R. Baker, Chihuahua; vein a fissure four feet wide, containing quartz and sulphurets, assaying fifteen per cent lead, $5 gold, and thirty ounces silver per ton; developed by one shaft forty-seven feet deep.

**Penn.**—150x1500 feet; situated on the top of Shock Hill, one mile from Breckenridge, Spaulding district; located in 1879, and in process of patent; owned by Philadelphia parties; superintendent, L. F. Hilliard, Breckenridge; ore body a deposit of quartzite and galena, varying in thickness, assaying fifty per cent lead and from 50 to 100 ounces silver per ton; developments—one shaft 160 feet deep; improvements—one shaft-house, containing steam hoisting machinery.



**Penn-Breckenridge Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $4,000,000, in 400,000 shares of $10 each, non-assessable; president, J. J. Ziegler; vice-president, E. H. Graham; treasurer, D. J. Chapman; secretary, S. B. Ford—all Philadelphia, Pa.; manager, I. J. Stover, Breckenridge; offices 426 Walnut street, Philadelphia, and Breckenridge; owns thirteen claims, viz.: Necessity, Surplus, Silver Slope, Brooks, Moose, Lincoln, French, Marlow, Tobacco, Norwood, Chapman, Miller, New Britain, 1500x150 feet each, and Summit, 116x150 feet; situated on the north slope of Nigger Hill, two and one-half miles from Breckenridge; located in 1880, and in process of patent; veins all fissures from five to twenty feet in width, pay streaks from four to twenty inches, containing porphyry and galena, milling, when sorted, $50 per ton; developed by one main tunnel 720 feet long, designed to open up the entire property, and fourteen shafts, one on each claim, from ten to thirty feet in depth; improvements—ore-house, cabin, chute, and wagon road.

**Peoria.**—Owned by J. G. Tidball, Denver, and others; claim 1500x150 feet; situated on the Spruce Creek slope of Mount Helen, six miles south-west of Breckenridge; located in 1880; vein a fissure six feet, pay streak from twelve to twenty-four inches, containing quartz carrying gold, silver, and copper, milling, when sorted, from $25 to $50 per ton; developed by a forty-foot tunnel.

**Peruvian.**—Owned by O. E. Clark & Co., Georgetown; claim 750x150 feet; situated on the Horseshoe slope of Ruby Mountain, Peru district, two miles from Decatur; located in 1873; vein a fissure seven feet wide, pay streak from one to twenty inches, containing gray copper, galena, zinc blende, and iron pyrites, in a quartz gangue, milling, when sorted, from ten to fifty ounces silver per ton; developed by 225 feet of drifts, 180 feet of shafts, and two tunnels 400 feet in length; improvements—ore-houses, shaft-houses, etc.; output over 100 tons.

**Philadelphia.**—150x1500 feet; situated on the north-east end of Glacier Mountain, one-fourth mile from Montezuma, Snake River district; located in May, 1882; owners E. L. Doyle and Jno. C. Callahan, both Montezuma, and Frank L. Tapscott, New York City; vein a fissure four feet wide, pay streak from nine to fifteen inches, containing gray copper, galena, and quartz; developments—openings from five to fifteen feet in depth on the vein, proving it up for a distance of 600 feet.

**Piccadilly.**—Owned by J. K. McDonald, Robinson, and Henry Bohm, John A. Black, and J. A. Turner, all Denver; claim 1500x150 feet; situated on the south slope of Sheep Mountain, Ten-mile district, one mile from Robinson; vein a contact four feet thick, containing sandstone and galena, assaying sixty ounces silver per ton; developed by a sixty-foot shaft.

**Pigeon.**—Owned by Theo. Harris and G. Sanders, both Decatur; claim 1500x150 feet; situated in the Horseshoe, Peru district, two miles from Decatur; located in 1880; vein a fissure four feet wide, containing quartz and galena, assaying 250 ounces silver per ton; developed by seventy feet of adits.

**Pine Martian.**—Owned by Chas. A. Gordon, Wheeler; claim 1500x150 feet; situated on the south slope of Wheeler Mountain, Ten-mile district, one-half mile from Wheeler; located August 10, 1882; vein a fissure from one to four feet wide, containing quartz carrying gold and silver, assaying

one-half ounce gold and fifty ounces silver per ton; developments—assessment work.

**Pioneer.**—Owned by G. H. Brown, Montezuma, J. H. Bolton, Sioux City, Ia., and R. Wurlitzer, Cincinnati; claim 1500x150 feet; situated on the south slope of Cooper Mountain, Peru district, one mile from Chihuahua; located in 1879; vein a fissure four feet wide, pay streak four inches, containing quartz and galena, assaying from 100 to 300 ounces silver per ton; developed by two drifts on the vein twenty and fifty feet in length and other workings.

**Piqua.**—150x1500 feet; situated on the east slope of Silver Mountain, one and one-quarter miles from Decatur, Peru district, and located in August, 1882; vein a fissure five feet wide, pay streak ten inches, containing quartz, galena, yellow copper, and sulphurets, assaying fifty ounces silver and some gold per ton; developed by one twenty-foot open cut and one eight-foot tunnel.

**Pirate.**—Owned by Frank C. Marsh, John R. Wilson, and Dr. J. R. Taylor, all Breckenridge; claim 1500x150 feet; situated on the south-east slope of Gibson Hill, one and one-half miles from Breckenridge; located in May, 1878; vein a contact ten feet thick, containing porphyry and iron carbonates, milling, when sorted, from ten ounces to seventy-five ounces silver per ton; developed by two shafts twenty-six and twenty-eight feet in depth and a twenty-foot incline from the bottom of the latter.

**Pittsburgh Placer.**—120 acres; situated on the south side of Illinois Gulch, three miles from Breckenridge; relocated in 1881; owners A. H. Bereman and others, Breckenridge; developed by one and one-half miles of ditching and 200 feet of sluicing.

**Pittston Tunnel Site.**—Owned by George McCloskey, Robinson, J. J. Gallagher, Andrew Bryden, Wm. Law, Ralph Le Coe, and others, Leadville; claim 3000x6 feet; situated on Ten-mile Creek, between Robinson and Kokomo; located in May, 1879; on which a tunnel has been driven 553 feet, opening up two veins seven feet wide each, on which two locations have been made, the Pittston Nos. 1 and 2, containing galena and carbonates, assaying twelve ounces silver per ton; developed by fifty feet of drifting from the tunnel.

**Plata.**—Owned by J. F. Hoag and J. E. and F. M. Larkin, all Montgomery; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, one and one-half miles from Montgomery; located April 9, 1882; vein a fissure three feet wide, pay streak two feet, containing gold and silver quartz and iron pyrites, assaying $30 per ton; developed by a ten-foot shaft.

**Plattsburg.**—150x1500 feet; situated on the west slope of Sheep Mountain, three miles from Robinson, Ten-mile district; located in June, 1882; owners Frank C. Ramsey and J. W. Cook, both Robinson; vein a contact thirty inches wide, pay streak twelve inches, containing lead carbonates and decomposed matter, assaying fifteen ounces silver per ton; devleopments—one, twenty-foot tunnel.

**Plebeian.**—150x1500 feet; situated on the south slope of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in September, 1882; owner Geo. Densmore, Georgetown; vein a fissure four feet wide, pay streak five inches of quartz, with pockets of sulphurets, assaying from 50 to 500 ounces silver per ton; developed by three ten-foot adits.

**Pocahontas.**—Owned by Henry G., J. L., and H. L. Detwiler, all Breckenridge; claim 1500x150 feet; situated on the north or Blue River slope of Mt. Quandary, ten miles from Breckenridge; located July 11, 1882; vein a fissure eleven inches wide, seamed with galena and gold quartz; developed by a ten-foot incline.



**Pocahontas Group.**—Owned by C. H. McCoy, Thos. Parish, and Franklin Pultz, all Recen; group comprises the Pocahontas, Highland Chief, and Evening Star lodes, 1500x150 feet each; situated on the east slope of Fletcher Mountain, Ten-mile district, three and one-half miles from Recen, and located September 8, 1881; veins all fissures from twelve to thirty-two inches in width, containing galena and gold quartz, assaying fifty per cent lead, from 30 to 150 ounces silver, and a trace of gold per ton; developed by three tunnels, thirty-two, sixteen, and twenty-one feet in length.

**Poe.**—Owned by Geo. S. Clarkson, Leadville; claim 1500x150 feet; situated on the north slope of North Star Mountain, Pollock district, nine miles from Breckenridge, and located in 1880; vein a fissure twenty-five feet wide, containing gold and silver bearing quartz, assaying one and one-half ounces gold and seventeen ounces silver per ton; developed by a fifteen-foot tunnel.

**Polar.**—(See Antartic and Polar.)

**Poor-man's Hope.**—150x1500 feet; situated on the east slope of Tornado Peak, five miles from Frisco, Ten-mile district, and located in 1880; owners Neef Bros., Denver, and J. V. Brown, Frisco; vein a fissure three feet wide, pay streak nine inches, containing galena, native copper, and quartz, assaying $60 in gold and fifteen ounces silver per ton; developed by one tunnel on the vein thirty feet long.

**Porcupine.**—150x1500 feet; situated on the north-west slope of Collier Mountain, one-fourth mile from Montezuma, Snake River district; located in February, 1880; owners James and W. M. Blanton, both Chihuahua; vein a fissure five feet wide, pay streak from one to five inches, containing zinc and galena, assaying seven per cent lead and forty ounces silver per ton; developed by a drift 108 feet long and one shaft ten feet deep.

**Potosi.**—50x850 feet; situated on the west slope of Glacier Mountain, one mile from Montezuma, Snake River district; located in June, 1865, and patented in 1874; owners S. D. McMillan, Cleveland, O., J. H. McMillan, Chicago, Ills., Ed. C. and Fred. A. Guibor and —— Powell, all Denver, and C. H. Guibor, Beloit, Kansas; vein a fissure twenty feet wide, with two pay streaks six and four inches wide, containing galena and quartz, carrying some ruby silver, milling, when sorted, 150 ounces silver per ton; developed by three drifts, twenty-five, twenty-eight, and sixteen feet long.

**Powhattan.**—Owned by J. L. Fuller and F. Crome; claim 1500x150 feet; situated in Spaulding district, one-fourth mile from Breckenridge; located in 1880; vein a fissure four feet wide, pay streak from four to eight inches, containing porphyry, galena, gray copper, and chlorides, assaying fifty per cent lead and seventy ounces silver per ton; developed by two tunnels aggregating 100 feet in length.

**Presque Isle Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, October 4, 1881; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and manager, F. H. Ellis; secretary, Wellington Downing; treasurer, J. R. Rockwell—all Robinson; vice-president, W. R. Smith, Chicago; office Robinson; owns seven claims, 150x1500 feet each, viz.: Saratoga, Sunbury, Olean, Davenport, Alligan, C. M. & F., and Keystone; situated on the south-west slope of Elk

Mountain, two and one-half miles from Robinson, Ten-mile district; located in March, 1881; veins all contacts varying in width, containing galena and sandstone, assaying fifteen ounces silver per ton; developed by seven shafts from ten to fifteen feet in depth, and other workings.

**Pride of the West.**—(See Cora Belle and Pride of the West.)

**Princess.**—150x1500 feet; situated on the east slope of Glacier Mountain, one and three-fourths miles from Montezuma, Snake River district; located in September, 1881; owners E. L. Doyle, Jno. Liston, and Jno. H. Bartlett, all Montezuma; vein a fissure, varying in width, and containing quartz, galena, and gray copper, assaying from twenty-five to sixty ounces silver per ton; developments—two shafts ten and twenty feet deep and other workings.

**Printer Boy Group.**—(Little Buckeye Group); owned by J. B. Conrad, Frank C. Marsh, Geo. H. Bressler, and Wm. Ileff, all Breckenridge; group consists of twenty-two claims, viz.: Printer Boy, Ethan Allen, Smuggler, Maud S., Lady Thorn, Gold-dust, Flora Temple, Patchen, Rarus, California Boy, Dexter, Alma, 76, 77, 78, 79, 80, 81, 82, Maria Gray, Jno. W. Forney, and Patterson, 150x1500 feet each; situated on the Illinois Gulch slope of Nigger Hill, one and one-half miles from Breckenridge; located in January and February, 1878; veins all contacts from one to five feet thick, containing porphyry and carbonates, assaying from $50 to $300 per ton; developed by two tunnels 175 and 225 feet in length, twenty-two shafts, one on each claim, from ten to eighty feet in depth, and other workings; some improvements.

**Prospect.**—(See Alleghany and Prospect.)

**Pulver Group.**—Five claims, viz.: Log Cabin, Treble, Extension of Discovery, Little Miami, and Black-eyed Mamie; owned by James H. Pulver, Breckenridge; claims 1500x150 feet each; situated on the east slope of Gibson Hill, two and one-half miles from Breckenridge; vein a vertical contact forty feet wide, pay streak twenty feet, containing porphyry and lead and iron carbonates, assaying a trace of gold and thirteen ounces silver per ton; developed by a tunnel forty-four feet long and four shafts from ten to twenty-five feet in depth.

**Putnam.**—Owned by C. A. and G. B. Walker and E. Carter, all Breckenridge; claim 1500x150 feet; situated on the divide between North and Middle Swan River, Missouri district, four miles from Swan River; located in 1875; vein a fissure four feet wide, pay streak four inches of quartz and argentiferous galena, assaying fifteen ounces silver per ton; developed by four shafts from ten to twenty-five feet in depth.

**Quagmire Group.**—Owned by H. M. Woodford and M. Wanner both Robinson; group comprises the Quagmire, Red Sand, and Bobtail, covering sixteen acres; situated on Elk Mountain, Ten-mile district, one and one-half miles from Robinson; located in 1878, and patented December 2, 1881; veins all contacts from four to eleven feet in thickness, pay streaks from four to twenty inches, containing sandstone, galena, and carbonates, milling, when sorted, twenty-five per cent lead and fifteen ounces silver per ton; developed by a shaft 100 feet deep and other workings; worked by a twelve-horse-power engine.

**Quebec.**—Owned by Frank King, Montezuma; claim 1500x150 feet; situated on the east slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma; located September 1, 1882; vein a fissure, varying in width, pay streak from eight to sixteen inches, containing quartz and galena; developed by a seventy-five-foot drift on the vein.



**Queen.**—Owned by Geo. Hammerschlag and Fred. Bruch, both Breckenridge; claim 1500x150 feet; situated on the north-east slope of Nigger Hill, four miles from Breckenridge, located in August, 1880; vein a contact four feet wide, pay streak from three to five inches, containing gold and silver quartz, milling, when sorted, $60 per ton; developed by a fifty-two-foot shaft and a fifty-foot tunnel.

**Queen of May.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district; located in June, 1882; owners Archie McDonald and D. J. K. McDonald, both Alma; vein a fissure four feet wide, pay streak twenty inches of quartz carrying gold, silver, and copper, assaying $35 per ton; developments—one fifteen-foot tunnel.

**Queen of Sheba.**—Owned by W. H. Eckbert and J. H. Conner, both Quandary; claim 1500x150 feet; situated on the north slope of North Star Mountain, one-fourth mile from Quandary; located in October, 1880; vein a fissure from ten to twelve inches wide, containing gold and silver quartz, assaying $100 per ton; developed by a twenty-foot tunnel.

**Queen of the Forest.**—150x1500 feet; situated on the top of Humbug Hill, one mile from Lincoln City, Avalanche district; located in 1879; owners James H. Hall and W. W. Moore, both Lincoln City, and Mrs. Mary J. Ebert, Denver; vein a contact six feet wide of gold-bearing quartz, assaying from $5 to $15 per ton; developed by two shafts fifty and thirty feet deep, with a ten-foot drift from the bottom of the former.

**Queen of the West.**—Owned by Daniel Recen, Recen (three-fourths), and Matthew Graff, Pittsburgh (one-fourth); claim 150x1500 feet; situated on the south slope of Jacque Mountain, one mile from Kokomo, Ten-mile district; located in August, 1878, and in process of patent; vein a fissure thirty feet wide, pay streak from two to ten feet and probably averaging three feet, containing sulphurets and chlorides in a sandstone gangue, milling an average of sixty-five ounces silver per ton; developed by three shafts, 60, 100, and 80 feet deep, respectively, 800 feet of drifting, mostly in mineral, and two cross-cuts 80 and 115 feet long, through which latter the property is worked; improvements—a wagon road to the lower side of the mine, thereby enabling the owners to tunnel at almost any depth, ore-houses, shaft-houses, etc.; output from January 1 to September 15, 1882, $35,000, all taken from a space about six feet square, and the property is making regular shipments.

**Queen of the West.**—150x1500 feet; situated on the north slope of Nigger Hill, one mile south of Breckenridge; located in January, 1882; owners Geo. Baker, Lincoln City, and Wm. Abbett, Breckenridge; vein a fissure three feet wide, pay streak from three to six inches, containing galena and porphyry, assaying thirty-two per cent lead and forty-five ounces silver per ton; developed by one shaft fifty feet deep.

**Queen Silver.**—Owned by Geo. E. Kedzie and N. F. Grover, both Chihuahua; claim 1500x150 feet; situated on the south slope of Collier Mountain, Snake River district, one mile from Chihuahua; located September 13, 1882; vein a fissure ten feet wide, containing quartz, carrying bismuth and galena; developed by a ten-foot shaft.

**Quincy and Leone.**—Owned by Henry E. Lopas, Breckenridge; claims 1500x150 feet each; situated on the north slope of Mount Quandary, ten miles from Breckenridge; located September 26, 1881; veins both fissures five

feet in width, pay streaks from six to twelve inches, containing quartz, galena, and yellow copper, assaying from $10 to $34 per ton; developed by two tunnels ten and twelve feet in length.

**Quincy and Twin.**—Owned by C. H. McCoy and S. E. Ball, both Recen; claim 1500x150 feet each; situated on the east slope of Pacific Mountain, Ten-mile district, four and one-half miles from Recen; located in September, 1879; vein a fissure from ten to sixteen inches wide, containing quartz and galena, assaying fifty-eight ounces silver and seven ounces gold per ton; developed by two tunnels seventeen and twenty-eight feet in length.

**Railroad Boy.**—Owned by George Kappus and V. F. Neis, both Kokomo; claim 1500x150 feet; situated on Bartlett Mountain, at head of McNulty Gulch, Ten-mile district; located in 1881; vein a contact four and one-half feet thick, pay streak from three to six inches, containing sandstone, galena, and carbonates, assaying eight ounces silver and a trace of gold per ton; developed by a fifty-five-foot tunnel.

**Rainbow.**—(See Copper Point Mining and Milling Company.)

**Ramsey Group.**—Two claims 150x1500 feet each; situated on the west slope of Sheep Mountain, three miles from Robinson, Ten-mile district; located in June, 1882; owners Frank C. Ramsey and J. W. Cook, both Robinson; vein a contact thirty inches thick, pay streak ten inches, containing lead carbonates, assaying sixteen ounces silver per ton; developments—two shafts eighteen and twelve feet deep.

**Rattler.**—Situated on the south slope of Tucker Mountain, two miles from Kokomo, Ten-mile district, and located in 1878; owners John E. Iszard, Leadville, H. S. Strong, G. W. Lindgreen, and B. F. Follett, all Kokomo; vein a contact two feet thick, containing decomposed matter and carbonates, assaying eleven ounces silver per ton; developed by one fifty-foot tunnel.

**Raven and Eagle.**—Owned by Bernard Heller, Denver, D. G. Swain, Washington, D. C., Levi Wilson, S. F. Neely, M. H. Insley, and E. Fenlon, all Leavenworth, Kas.; superintendent, William Gleason, Kokomo; claims 1500x150 feet each; situated on the south slope of Elk Mountain, Ten-mile district, one mile from Kokomo; located in 1879, and patented in September, 1881; vein a contact from four to six feet in thickness, containing galena and carbonates in a sandstone gangue, milling, when sorted, from $20 to $50 per ton; developed by a tunnel 600 feet long, four upraises from 60 to 120 feet in height, three lateral drifts fifty feet long each, and other workings; improvements—ore-houses, etc.; output over 700 tons, and the property is making regular shipments.

**Raven-Goldust Placer.**—Owned by George Puterbaugh, Breckenridge, and Josiah Crotty, Peoria, Ills.; claim covers thirty-eight acres; situated on Illinois Gulch slope of Nigger Hill, two and one-half miles from Breckenridge; developed by two ditches crossing the property and ten shafts from ten to sixty feet in depth. The porphyry dike appearing in the Dry placer extends through the Raven-Goldust.

**Ravenna and Alliance Group.**—Two claims, 150x1500 feet each, viz., Ravenna and Alliance No. 1 and Alliance Tunnel site, 3000x6 feet; situated on the east slope of Sheep Mountain, one-half mile from Robinson, Ten-mile district; the first located in 1879 and the two last in 1881; owners S. H. Ellis, Robinson, F. W. Woodbridge & Co., Ravenna, Ohio, N. E. Van Sickle, Akron, Ohio, and A. W. Coates, Alliance, Ohio; vein a contact twenty-eight inches thick, containing sandstone and galena, assaying twelve ounces silver per ton; developed by a tunnel 497 feet long, a shaft sixty-five feet deep, and other workings.



**Recen.**—150x1500 feet; situated on the south slope of Royal Mountain, one mile from Frisco, Ten-mile district, and located in 1879; owners Daniel, Henry, and Andrew Recen, all Recen; vein a fissure five feet wide, pay streak twenty inches, containing quartz and galena, assaying 100 ounces silver per ton; developed by one sixty-seven-foot tunnel and one forty-seven-foot shaft.

**Recompense.**—Owned by H. W. Baldwin and Wm. Egan, both Breckenridge, and Jas. R. Hicks, Denver; claim 1500x150 feet; situated on Spruce Creek, six miles south-west of Breckenridge, Pollock district, and located in September, 1881; vein a fissure four feet wide, containing quartz, chlorides, sulphurets, and yellow copper, assaying ten per cent copper, a trace of gold, and fifty-five ounces silver per ton; developed by a twenty-foot open cut.

**Reconstruction Group.**—(See Continental G. & S. Mining Co.)

**Redbird.**—Owned by R. Morrison and W. H. Mitchell, both Kokomo; claim 1500x150 feet; situated on the north-east slope of Elk Mountain, Ten-mile district, two miles from Kokomo, and located in May, 1879, and in process of patent; vein a fissure three feet wide, containing sandstone and galena, assaying thirty-five per cent lead and twenty-five ounces silver per ton; developed by three shafts, forty, thirty-five, and fifteen feet in depth, all in mineral.

**Red Cloud.**—150x1500 feet; situated on the north slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district, and located in August, 1882; owners F. M. Hall and Z. T. Lane, both Heywood; vein a fissure four feet wide, pay streak from eight to ten inches, containing quartz, galena, gray copper, and sulphurets, assaying from 50 to 500 ounces silver per ton; developed by one shaft twenty feet deep.

**Red Elephant.**—150x1500 feet; situated on the north slope of North Star Mountain, ten miles from Breckenridge, and located in 1881; owners D. W. Fall and E. L. Hyatt, both Breckenridge; vein a fissure four feet wide of mineralized quartz, assaying one ounce gold and twenty ounces silver per ton; developed by one twenty-five-foot shaft.

**Red Jacket.**—150x1500 feet; situated on the east side of Boulder Creek, twenty miles from Frisco, Wilkinson district, and located in August, 1881; owners T. P. Kent and Adolph Ballif, both Frisco; vein a fissure ten inches wide, containing galena, gray copper, and quartz, assaying from 50 to 200 ounces silver per ton; developed by one ten-foot tunnel.

**Red Lion.**—Owned by E. G. Blake, A. Bowles, and H. T. Church, all Lincoln; claim 200x25 feet; situated on the south slope of Humbug Hill, four miles from Breckenridge, and located in July, 1882; vein a contact three feet wide, containing gold quartz; developed by a twenty-one-foot shaft.

**Red Lion.**—150x1500 feet; situated on the east slope of the Ten-mile Range, two and one-half miles west of Breckenridge, and located in January, 1882; owners W. H. Watson, Henry Hamilton, and J. L. Taylor, all Breckenridge; vein a fissure thirteen feet wide, through which is scattered iron pyrites and galena, assaying from ten to thirty ounces silver and from $2 to $10 in gold per ton; developed by one tunnel 130 feet long, and other workings.

**Red Wing.**—Owned by Michael, James, and John Ryan, all Robinson; claim 1500x150 feet; situated on Sheep Mountain, adjoining the Robinson property, one-fourth mile from Robinson, and located in 1879; vein a contact three feet thick, pay streak from six to twelve inches, containing sandstone, galena, and carbonates, assaying forty ounces silver per ton; developed, by a fifty-five-foot shaft.

**Regina Group.**—Owned by J. I. and W. H. Sipple, both Kokomo, and others; group comprises the Regina, Wolverine, and a fractional claim, covering thirteen acres; situated on the south slope of Jacque Mountain, Ten-mile district, one and one-half miles from Kokomo; located in September, 1881, and in process of patent; vein a contact from two to four feet thick, containing lead carbonates, milling, when sorted, fifty per cent lead and from twenty-five to fifty ounces silver per ton; developed by one tunnel 170 feet long, four shafts, eighty, twenty, thirty, and sixty feet in depth, and other workings.

**Rena.**—(See Aggie, Ida, and Rena.)

**Republic.**—Owned by W. W. Webster, Denver, W. A. Hamill, Georgetown, and F. E. Webster and J. A. Conwell, both Montezuma; claim 1500x150 feet; situated on the north slope of Independence Mountain, Snake River district, three miles from Montezuma; located July 16, 1877, and in process of patent; vein a fissure four feet wide, pay streak fourteen inches, containing galena and zinc blende in quartz, milling, when sorted, $7 in gold and ninety ounces silver per ton; developed by two tunnels 230 and 125 feet in length, and other workings, exposing large ore-reserves; improvements—ore-house, dwelling-house, etc.

**Revenue Belle.**—150x1500 feet; situated in Brown's Gulch, one mile from Lincoln City; located in October, 1882; owners E. B. Meeker, Lincoln, and Jno. W. Love and M. B. Corbin, both Breckenridge; vein a contact five feet thick of quartz carrying gold; developments—one ten-foot shaft and one ten-foot-face open cut.

**Richardson Group.**—Six claims, viz., Richardson, Susquehanna, Atlantic, Valley View, Missouri, and Fannie King, 1500x150 feet each; owned by Allen P. and John C. Richardson, both Breckenridge, and Samuel A. Richardson, Gallatin, Mo.; group situated on the south-west slope of Gibson Hill, one and one-fourth miles from Breckenridge; located in April, 1881; vein a vertical fissure three and one-half feet wide, pay streak twenty inches, containing gold quartz and galena, assaying $7 in gold and $14 in silver per ton; developed by shafts from fifteen to sixty feet in depth, and other workings.

**Ridge No. 1.**—150x1500 feet; situated on the west slope of the Park Range, seven miles south-east of Breckenridge, McBarnes district; located in August, 1880, and patented in May, 1881; owners B. M. Newcomb, R. F. Love, and I. A. Cammett, all Breckenridge, and O. W. Pitcher, Belfast, Maine; vein a fissure four feet wide, containing quartz, antimonial silver, and gray copper, assaying from twenty to fifty ounces silver per ton; developed by one shaft twenty-five feet deep and two tunnels fifty and forty feet long.

**Rip Van Winkle.**—Owned by Will Youngson & Co., Georgetown; claim 1500x150 feet; situated on the eastern slope of the Horseshoe Hill, Peru district; vein a fissure varying in width, containing galena in a quartz gangue; developments—assessment work.

**Rising Sun.**—150x1500 feet; situated on the south-east slope of Sheep Mountain, two miles from Kokomo, Consolidated Ten-mile district; located in 1878; owners Andrew Recen, H. S. Strong, and B. F. Follett, all Kokomo, Jno. E. Iszard, Leadville, V. C. Lewis and A. H. Ward, both Colorado Springs; vein a fissure three feet wide, pay streak eight inches, containing porphyry and carbonates, assaying forty per cent lead and thirty ounces silver per ton; developments—one sixty-foot shaft and one fifteen-foot open cut.



**Rising Sun Group.**—Owned by Chas. Hoyt, Stephen Welsh, John C. Staats, Israel Stambaugh, John Holbrook, and James Harvey, all Recen; group comprises the Rising Sun, Stephen Welsh, and Ground-hog Case lodes, 1500x150 feet each; situated on the east slope of Pacific Mountain, Ten-mile district, six miles from Recen; located in September, 1881; vein a fissure eight feet wide, pay streak two inches, containing galena and sulphurets, assaying from 50 to 100 ounces silver per ton; developed by a forty-foot tunnel with a ten-foot shaft from the breast and a twenty-five-foot tunnel on the vein.

**Rispah.**—(An extension of Eldorado); owned by W. H. Eckbert and M. M. Howe, both Quandary City; claim 1500x150 feet; situated on the north slope of North Star Mountain, at Quandary City; located May 24, 1882; vein a blanket five feet thick, containing gold-bearing quartz, iron and copper pyrites; developed by a forty-foot shaft and a thirty-foot open cut and tunnel, designed to cut the bottom of shaft.

**Roaring Lion Group.**—Owned by S. Campbell and George Millard, both Breckenridge; group comprises three claims, viz., Roaring Lion, Cold Spring, and Comet lodes, 1500x150 feet; situated on the south slope of Hunter's Hill, Pollock district, nine miles from Breckenridge; located in August, 1881; vein a fissure four feet wide, pay streak from one to six inches, containing gold quartz, assaying from $25 to $50 per ton; developed by two shafts fifteen and thirty feet in depth and two tunnels 50 and 125 feet in length, respectively.

**Rob Roy.**—Owned by W. H. Eckbert, J. H. Conner, and J. C. Donahue, all Quandary City; claim 1500x150 feet; situated on the north slope of North Star Mountain, at Quandary City, and located in August, 1880; vein a blanket fifteen feet thick, containing gold-bearing quartz near the surface and the same intermixed with iron pyrites lower down, milling, when sorted, from $20 to $35 per ton; developed by an open cut and tunnel fifty feet long.

**Rob Roy.**—1500x150 feet; situated on the Iowa Hill placer; located in 1880, and in process of patent; owner Col. A. J. Ware, Breckenridge; vein a vertical contact thirty inches wide, pay streak nine inches, containing galena and porphyry, assaying fifty per cent lead, thirty-two ounces silver, and one-half ounce gold; developed by one tunnel 100 feet long, one fifty-foot shaft, and other workings.

**Robert Emmet.**—(See Grand View and Robert Emmet.)

**Robinson Consolidated Mining Company (The).**—Incorporated under the laws of New York, March 2, 1880; capital stock $10,000,000, in 200,000 shares of $50 each, non-assessable; president, Hiram A. Johnson; vice-president, Wm. K. Lathrop; secretary, J. K. Selleck; offices 54 William street, New York, and Robinson; owns Little Giant, Big Giant, G. B. R., Seventy-eight, Undine, Undine No. 2, Howard, Sallie, Mackay, Peora, Pirate, Pirate No. 2, Checkmate, Rhone, Ten-mile, Forty-six, Roberts, Windsor, Little Robbie, and Frank Myra lode claims, covering ninety acres, about two-thirds of which are patented; situated on the east slope of Sheep Mountain, at Robinson, Ten-mile district; veins all contacts from one to five feet in width, containing galena and sulphurets in a sandstone gangue, milling, when sorted, an average of seventy-three ounces silver per ton; developments—one 300-foot shaft, one 1,100-foot-incline, and a large amount of drifting, stoping, and other workings; improvements—seven engines, three drill-

ing-machines, air-compressors, and other machinery to work the property, ore-chutes, gangways, ore-houses, shaft-houses, etc., and a smelter equipped with complete and improved machinery for treating ores, offices, dwelling-houses, etc.; output from January 1 to September 1, 1882, $500,000, and the property is making regular shipments. This mine is now under lease to Thomas H. Greer, Robinson.

**Robley.**—150x1500 feet; situated on the top of Mineral Hill, three miles from Breckenridge ; located in 1876, and patented; owner the Boston Mining Company; vein a fissure from two to five feet wide, pay streak from two to twenty-four inches, containing galena in a porphyry gangue, milling, when sorted, $40 per ton; developed by three tunnels aggregating 900 feet in length and three shafts aggregating 200 feet, and other workings.

**Rochester Group.**—Four claims, 150x1500 feet each, viz.: Rochester, Fulton, Julia K., and Hattie; situated on the north slope of Royce Hill, at Rock Creek, twenty miles from Frisco; located in May, 1882; owners William Clifford, G. F. Roth, H. E. Hoffman, Harry Evans, V. J. Coyne, and C. W. Weis, all Frisco; veins all fissures from four to fourteen feet wide, pay streaks from three to forty inches, containing galena and quartz, assaying fifteen per cent lead, five per cent copper, and from 10 to 250 ounces silver per ton; developed by five shafts twenty feet deep each.

**Rochester Queen Group.**—Six claims, 150x1500 feet each, viz.: Rochester Queen, Ben. Franklin, White Swan, Black Swan, Sweet William, John J., and Santa Claus; situated on the North Swan River, at Rexford, North Swan district; owners A. M. Cook, M. A. Darrow, Geo. J. Washburn, O. B. Scobey, and A. L. Jessup, all Denver; veins all fissures from six to twelve inches wide, containing quartz and decomposed porphyry with a heavy iron stain, carrying both silver and gold, milling, when sorted, an average of $50 per ton; developments—one seventy-five-foot shaft, 325 feet of drifting, and one tunnel 100 feet long, with a seventy-five-foot shaft sunk from the level of the tunnel; improvements—ore-houses, shaft-houses, etc.; output 500 tons, and the property is a regular producer.

**Rocky Point.**—Owned by Charles Oty and others, Decatur; claim 1500x150 feet; situated on the west slope of Cooper Mountain, Peru district, one and one-half miles from Chihuahua, and located in August, 1879; vein a fissure two and one-half feet wide, pay streak ten inches, containing quartz and galena, assaying eighty ounces silver per ton; developed by a twenty-foot adit.

**Rocky Mountain.**—Owned by V. F. Neis and Edward Sayers, both Kokomo; claim 1500x150 feet; situated on the east slope of Copper Mountain, Ten-mile district, and located in 1880; vein a fissure from three to four feet wide, containing porphyry and galena; developed by a thirty-foot tunnel and a fifty-foot shaft.

**Rose of Breckenridge.**—(See Colorado and New Mexico Mining and Smelting Company.)

**Rothschild Group.**—Owned by W. T. Lewis, Decatur; group comprises eleven claims, viz.: Rothschild, Vinton, Mackey, Quadroon, Agincourt, Kohinoor, Octaroon, Detroit, Jim Fisk, Mistake, and Tariff East, 1500x150 feet each; situated on the south slope of Cooper Mountain, Peru district, one mile from Decatur; Rothschild, Mackey, Vinton, Jim Fisk, Mistake, and Tariff East located in August, 1879, and the others in January, 1882, and Rothschild patented; veins all fissures from three to seven feet in width, pay streaks from three to thirty-six inches, containing galena and gray and yellow copper in a quartz gangue, milling, when sorted, from twenty to thirty-five per cent lead and from 100 to 500 ounces silver per ton; the Rothschild developed by a sixty-foot drift, a twenty-foot cross-cut, and a thirty-five-foot shaft, and the others by ten shafts from ten to forty feet in depth, and three cross-cuts from thirty to forty feet in length, exposing large ore-reserves; output $20,000, mainly out of Tariff East and Rothschild.



**Roxy Belle.**—Owned by Robert Snodgrass, S. W. Abbott, Thomas Wingate, and J. L. Spenser, all Leadville; claim 1500x150 feet; situated on the south slope of Mount Quandary Pollock district, one mile from Quandary City, and located in September, 1880; vein a fissure five feet wide, and pay streak twenty inches, containing quartz and yellow copper, assaying from $50 to $60 per ton in gold and silver; developed by a twenty-foot tunnel.

**Royal Consolidated Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in 1882; president, Wm. Westervelt; secretary and treasurer, F. L. Tapscott—both New York; vice-president, E. L. Doyle, Montezuma; office 60 Broadway, New York, and Montezuma; owns the Silver Prince lode and mill site and Continental lode and mill site; situated in the Snake River district, near Montezuma, and in process of patent; vein a fissure varying in width, and containing gray copper, ruby silver, and silver glance, in a quartz gangue, milling, when sorted, $65 net per ton.

**Royal Gorge, Commodore, and Admiral.**—Three claims, 150x1500 feet each, and one mill site five acres; situated on the south slope of McLellan Mountain, at head of Horseshoe Gulch, three miles from Decatur, Peru district; the first and the mill site located in 1881, and in process of patent, and the others in 1882; owners W. F. Rowen and I. B. Hewitt, both Decatur, H. P. Walker, Boulder City, and H. P. Songster, Detroit, Mich.; veins all fissures about three feet wide (traceable on the surface for 1,200 feet), pay streak eighteen inches, containing arsenical iron and quartz carrying ruby and brittle silver, silver glance, copper, and gold, milling, when sorted, from $50 to $250 per ton; developed by three adits with ten-foot faces each, one on each claim, and a seventy-foot level on the Royal Gorge.

**Royal Mountain Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in April, 1881; capital stock $500,000, in 20,000 shares of $25 each, non-assessable; president, Wm. Graff, Kokomo; vice-president, A. L. Allen, Kenton, O.; secretary, Henry Learned, Frisco; treasurer, C. F. Shedd, Fairfield, Neb.; manager, D. R. Smith, Frisco; office Frisco; owns claims Nos. 1 to 13; situated on the south slope of Royal Mountain, two miles from Frisco, Ten-mile district; located in April, 1881; veins all fissures from six inches to ten feet wide, pay streaks from four to eighteen inches, containing galena and quartz, assaying thirty-six per cent lead and from 50 to 150 ounces silver per ton; developments—one tunnel 125 feet long on No. 1, one seventy-five-foot tunnel on No. 2, and assessment work on the other claims; and Sellers and Congress, two claims, situated on the south slope of Keifer Mountain, four miles from Frisco, Ten-mile district; located in April, 1881; vein a fissure three feet wide, pay streak twelve inches of galena and quartz, assaying from 50 to 200 ounces silver per ton; developed by two years' assessment work.

**Russell Group.**—Four claims, 300x1500 feet each, viz.: Russell, Little Giant, Jessie M., and Yellow Jacket; situated on the west slope of Collier Mountain, one-fourth mile from Montezuma, Snake River district; located in September, 1882; owners T. R. Newman, Montezuma, and Jno. G. Worthington (attorney), Chihuahua; veins all fissures from one to six feet wide, pay streaks from four to twenty inches, containing bismuth, quartz, and galena, assaying one ounce gold and twenty ounces silver per ton; develop-

ments—one shaft thirty-five feet deep on the Russell, one shaft twenty feet deep on the Little Giant, and a drift on each of the other two claims twenty feet long.

**Rust, George & Co.**—(See George Rust & Co.'s Reduction-works.)

**Ryan Gulch Placer.**—3,000 acres; situated in Ryan Gulch and on the Blue River, twelve miles from Breckenridge, Lake district; located in September, 1870; owners J. D. Roby, M. Silverthorn, and C. Buenz, all Breckenridge; developments—two and one-half miles of ditch, 400 feet of fluming, and 600 feet of iron piping; worked by one No. 4 Hydraulic Giant; output $4,000.

**S. A. W. and Stepping-stone.**—Owned by S. S. Snodgrass, S. W. Abbott, and Thomas Wingate, all Leadville; claims 1500x150 feet; situated on the south slope of Mt. Quandary, Pollock district, one mile from Quandary City; located in September, 1880, and September, 1881; veins both fissures five feet wide each, pay streaks from ten to thirty inches, containing gold quartz and copper and iron pyrites, assaying from $25 to $75 per ton; developed by three ten-foot open cuts and one twenty-foot tunnel.

**S. L. Collins and Divide.**—Two adjoining claims on the same vein, 150x1500 feet each; situated on the south-west slope of Bald Mountain, two and one-half miles from Argentine; located in May, 1882; owner S. D. Stearnes, Argentine; vein a fissure three feet wide, pay streak from two to nine inches, containing galena and quartz, assaying forty per cent lead and thirty ounces silver per ton; developed by four shafts from fifteen to twenty-five feet in depth and one twenty-foot tunnel.

**Sts. John Tunnel.**—(See Boston Mining Company.)

**Salem and Silver Star.**—Two claims, 150x1500 feet each; situated on the north slope of North Star Mountain, eleven miles from Breckenridge, Pollock district; located in July, 1882; owners E. L. Hyatt and J. F. Waller, both Breckenridge; vein a fissure three feet wide, pay streak from six to fourteen inches, containing yellow copper and telluride quartz, assaying $100 per ton; developments—two tunnels thirty and twenty feet long.

**Salina Group.**—Owned by F. F. Matthews, St. Louis, J. B. Lovell and A. M. Park, both Kokomo, and J. H. Dyke, Leadville; group comprises three claims, 1500x150 feet each; situated on the west slope of Jacque Mountain, Ten-mile district, three-fourths mile from Kokomo; located in 1880, and patented in 1881; vein a contact, varying in thickness, pay streak eighteen inches of galena and iron in a sandstone gangue, milling, when sorted, $60 gross per ton; developed by a 110-foot incline and other workings; operated by a ten-horse-power engine.

**Sallie Barber.**—150x1500 feet; situated on the east slope of Nigger Hill, four miles from Breckenridge, and located in May, 1882; owners G. T. Metzger, C. H. Bennett, A. W. Phillips, Wm. Robinson, Chas. Keyser, Wm. Jones, Chas. Cooper, and F. S. Dubbs, all Breckenridge, James H. Johnson, Denver, T. J. Hoyt, Durango, and John Deming, Abilene, Kas.; vein a fissure six feet wide, pay streak fifteen inches, containing galéna and carbonates in a porphyry gangue, milling, when sorted, twenty-five per cent lead and forty-six ounces silver per ton; developed by one shaft 270 feet deep and other workings; operated by a ten-horse-power engine; output fifty tons.

**Salt Lick Placer.**—1,300 acres; situated in Salt Lick Gulch, twelve miles from Breckenridge, Salt Lick district; owners Jno. H. Willoughby and E. Carter, both Breckenridge, Peter Finnerty, Leadville, and others represented by H. F. Whicher, Boston, Mass.; developments—nine miles of ditching, one-half mile of fluming; worked by two Hydraulic Giants; estimated output $30,000.



**San Domingo Group.**—Owned by C. Heck, Decatur, and Theo. Burton, Georgetown; group comprises the San Domingo, Silver Wave, and Enterprise lodes, 1500x150 feet each; situated on the north slope of Silver Mountain, Peru district, one-fourth mile from Decatur, and located August 24, 1880; vein a fissure from one to three and one-half feet wide, with three pay streaks from four to eight inches each, containing bismuth quartz, assaying from one to two ounces gold and forty ounces silver per ton; San Domingo developed by a forty-foot drift on the vein, and the others by a twenty-foot drift each.

**San Juan.**—150x1500 feet; situated on the north slope of Mineral Hill, three miles from Breckenridge, and located in May, 1880; owners E. R. Gaskill and W. A. Johnson, both Lincoln City; vein a fissure four feet wide, pay streak ten inches, containing galena and porphyry, assaying thirty-two per cent lead and thirty ounces silver per ton; developed by one shaft thirty feet deep.

**Sarah Jane.**—150x1500 feet; situated on the east slope of Wichita Mountain, one-half mile from Frisco, Ten-mile district, and located in August, 1882; owners Adolph Ballif and J. V. Brown, both Frisco; vein a fissure eighteen inches wide, containing galena and quartz, assaying fifty-five per cent lead and twenty ounces silver per ton; developed by one ten-foot tunnel.

**Saratoga.**—(See Presque Isle Consolidated Mining Company.)

**Saw-log Placer.**—Owned by W. H. Eckbert and M. M. Howe, both Quandary City, and D. W. Marshall, Philadelphia; claim covers eighty acres; situated in the channel of Blue River, at Quandary City; located September 30, 1881, and patented in April, 1882; developed by ten shafts from eight to twelve feet in depth and seventy-five feet of ditching; worked by ground sluice. The Rispah and Eldorado vein is supposed to extend through this property.

**Scott.**—150x1500 feet; situated at the head of Meadow Creek, six miles from Frisco, Wilkinson district; located in August, 1879; owners C. T. Bell, J. S. Scott, and C. J. Whitaker, all Frisco; vein a fissure three feet wide, pay streak from three to six feet wide, containing a fair material, assaying ten per cent lead and twenty ounces silver per ton; developed by a thirty-foot shaft.

**Scott.**—Owned by A. Rankin and G. W. Davidson, both Breckenridge; claim 1500x150 feet; situated on the north-west slope of Gibson Hill, one and one-half miles from Breckenridge; located April 18, 1882; vein a fissure seven feet wide, pay streak two feet, containing gold and silver quartz, assaying seven-tenths ounce gold and fifteen ounces silver per ton; developed by a forty-foot tunnel, and other workings.

**Setting Sun.**—Owned by Frank C. Graham, Benjamin T. Vaughn, and Henry B. Lammert, all Kokomo; claim 1500x150 feet; situated on the south slope of Fletcher Mountain, Ten-mile district, four miles from Kokomo; located August 12, 1882; vein a fissure varying in width, pay streak eight inches, containing galena and quartz, assaying from 30 to 100 ounces silver per ton; developed by a twenty-foot shaft.

**Seventy-nine.**—150x1500 feet; situated on the west slope of Mineral Hill, one and one-half miles from Breckenridge; located in May, 1879; owners W. H. Strohm and Sam'l Beck, both Breckenridge; vein a fissure thirty inches

wide, pay streak from five to fifteen inches of porphyry and galena, assaying thirty per cent lead, one-half ounce gold and thirty-five ounces silver per ton; developments—one fifty-foot shaft, one forty-foot open cut, and one seventy-foot tunnel.

**Seymour Group.**—Three claims, viz., the Seymour, Clipper, and Carbonate, 150x1500 feet each; owned by M. F. Blodgett and E. U. Canfield, both Breckenridge; claims 1500x150 feet each; situated on the west slope of Red Mountain, six miles south of Breckenridge; located in 1879 and 1880; vein a contact from three to nine feet in width, pay streak from ten to fifty inches, containing galena, chlorides, and sulphurets, in a porphyry gangue, milling, when sorted, twenty per cent lead and from thirty to sixty ounces silver per ton; Seymour developed by two shafts ninety and forty feet in depth and a tunnel 150 feet long, cutting the bottom of the former, and on the others one fifteen-foot shaft each. There is a main tunnel twenty-five feet long, designed to cut the veins at great depth; output forty tons.

**Shamrock.**—150x1500 feet; situated on the south slope of Mineral Hill, one-half mile west of Lincoln City; located in October, 1880; owners Timothy Murphy, Pat. McCarty, and Henry J. Litten, all Lincoln City; vein a fissure twenty inches wide, pay streak nine inches, containing galena in a quartz gangue, milling, when sorted, fifty-five per cent lead and twenty-five ounces silver per ton; developed by one tunnel ninety feet long, four shafts from 40 to 100 feet in depth, and other workings.

**Shamrock.**—150x1500 feet; situated on the south-west slope of the Park Range, opposite mouth of Rock Creek, Divide district; located in July, 1882; owners C. W. Ellwood and Mrs. S. E. Ellwood, both Heywood; vein a fissure five feet wide, pay streak sixteen inches, containing gold and silver bearing quartz, assaying $52 per ton; developed by one open cut seventy-five feet long and one shaft eleven feet deep.

**Sheep Mountain and Ten-mile Mining Company (The).**—Incorporated under the laws of Colorado, July 19, 1880; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, Jas. Shire; vice-president and secretary, T. W. Leonard; treasurer, James P. De Mattos; manager, Robert O'Neil; office 216 Harrison Avenue, Leadville; owns seven claims, 150x1500 feet each, viz.: Montezuma, Victor, Ella, Treasure Trove, Virginius, Last Dollar, Belle of the West, and Western Star; situated on Sheep Mountain, one mile from Robinson, Ten-mile district; located in April, 1879; veins all contacts, varying in thickness, and containing sandstone, carbonates, and galena, assaying from five to twenty-five ounces silver per ton; developments—six shafts from fifty to ninety feet in depth, and other workings.

**Shibboleth.**—Owned by Geo. Puterbaugh, Wm. Kellogg, and R. A. Sankey, Breckenridge, William E. Beck and L. Jacobson, both Denver, L. R. Wilson, Louisville, and others; claim 1500x150 feet; situated on the north slope of Fletcher Mountain, seven miles from Breckenridge; located in 1879; vein a contact varying in width, containing porphyry, carbonates, and galena, assaying from 50 to 250 ounces silver per ton; developed by a thirty-five-foot incline, with a twenty-nine-foot shaft from bottom of incline.

**Shock-Discovery Group.**—Owned by John Shock, Preston; group embraces Shock-Discovery, Discovery Extension N. E., Discovery Extension S. W., Double Discovery Extension S. W., and Treble Discovery Extension S. W., covering 7170x150 feet, Intermediate, Adelia, Timothy, Inferno, and Surles, 3,000 feet long each, comprising a belt 400 feet wide; situated in Gold Run Basin, and crossing it nearly at right angles to the creek, three miles north-east of Breckenridge, Union district; located from 1865 to 1882; veins



all fissures from two to forty-four feet in width (running north-east and south-west), pay streaks from six inches to fifteen feet, containing auriferous pyrites and argentiferous sulphurets, assaying at the surface an average of $12 per ton ($9.00 gold and $3.00 silver); developed by the Gold Run Flume Extension, which cuts and opens up the principal vein to a depth of from eight to twelve feet on Shock-Discovery, three shafts, thirty-two, forty-one, and twenty-eight feet in depth on Discovery Extension N. E., one forty-one-foot shaft on Double Discovery Extension S. W., a twenty-five-foot shaft on Treble Discovery Extension S. W., a twenty-two-foot shaft and an open cut and tunnel fifty-five feet long, designed to cut the vein at considerable depth, and other workings. Adjoining the Double Discovery Extension are three claims 1500 feet long, on which some development has been done; a ditch 500 feet long, running through the center of the basin, drains the entire group, which includes two other claims, 150x1500 feet, adjoining the Shock-Discovery, viz., Preston and Gold Run; developed by two ten-foot shafts, showing fairly.

**Sidney.**—150x1500 feet; situated on the south slope of Silver Mountain, one mile from Decatur, Peru district; located in 1881; owners W. A. and Robert Ritchie, both Decatur; vein a fissure eight feet wide, pay streak from four to fourteen inches of galena and quartz, assaying from 50 to 200 ounces silver per ton; developed by one cross-cut tunnel twenty-five feet long, and other workings.

**Silver Bowl Mining Company (The).**—Incorporated under the laws of Colorado, in July, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, S. O. Thatcher, Lawrence, Kas.; vice-president, B. H. Dubois; secretary and superintendent, Chas. J. Moore; treasurer, Van H. Brooks—all Leadville; office 405 Harrison Avenue, Leadville; owns four claims, 150x1500 feet each, viz., Silver Bowl, Hidden Treasure, Royal Tiger, and Panther; situated on Chalk Mountain, one-half mile from the D. & R. G. track, between Summit and Robinson, Ten-mile district; located in 1879, the first two patented in October, 1881, and the last in process; vein a fissure twenty feet wide, containing quartz and galena, assaying from 25 to 100 ounces silver per ton; developed by 950 feet of tunneling and shafting. The old Inter-Ocean Company's property is embraced in that described.

**Silver Brick.**—Owned by T. E. Clery, Montezuma; claim 1500x150 feet; situated on the north-east slope of Glacier Mountain, Snake River district, one mile from Montezuma; located in July, 1881; vein a fissure five feet wide, pay streak twenty inches, containing quartz and galena, assaying fifty per cent lead and from 20 to 150 ounces silver per ton; developed by a thirty-foot shaft and a series of openings on the vein.

**Silver Bullion Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in March, 1882; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and manager, R. J. Lipe; vice-president, V. G. Hills—both Kokomo; secretary, S. H. Ellis; treasurer, M. Wanner—both Robinson; offices Kokomo and Robinson; owns the Willie Wanner, Silver Bullion, Columbia, and nine other lodes, 1500x150 feet each; situated on the south slope of Jacque Mountain, Ten-mile district, one and one-half miles from Kokomo; located in 1879, and Willie Wanner patented; vein a contact from two to four feet wide, containing sandstone, galena, and carbonates; Willie Wanner developed by a forty-foot tunnel and a sixty-five-foot incline, and others by shafts from ten to twenty feet in depth.

**Silver Chariot.**—150x1500 feet; situated on the west slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district; located in October, 1881; owners Hugh R. Steele and Vandyke & Stone, all

Montezuma, and Wm. Mendenhall, Decatur; vein a fissure four feet wide, pay streak from four to seven inches, containing galena and quartz, assaying from 40 to 100 ounces silver per ton; developed by one shaft twenty feet deep.

**Silver Cliff.**—Owned by R. J. Jones, Georgetown, Charles Hardling, Keokuk, Ia., and Wm. Edwards, Idaho Springs; claim 1500x150 feet; situated on the south slope of Ruby Mountain, Peru district, one-fourth mile from Decatur; located July 23, 1880; vein a fissure twenty feet wide, with five pay streaks from one to eight inches, containing quartz, galena, and yellow copper' assaying from fifteen to sixty ounces silver per ton; developed by a twenty-foot tunnel.

**Silver Cross.**—Owned by V. F. Neis and Edward Sayers, both Recen; claim 1500x150 feet; situated on Copper Mountain, Ten-mile district, four miles from Kokomo; located in 1880; vein a contact eight feet thick, pay streak from four to twenty inches, containing sandstone and galena, assaying twenty per cent lead and from fourteen to eighteen ounces silver per ton; developed by a shaft 100 feet deep and other workings.

**Silver Crystal Group.**—Eight claims, 150x1500 feet each, viz.: Silver Crystal, Harlem, Hudson, Hudson No. 2, Powhattan, Gem, Big Buck, and Atlantic; situated on the east slope of Crystal Peak, six and one-fourth miles from Breckenridge, Crystal Lake district; located in 1878-9; owners Geo. W. Mumford, Eli Loback, and E. L. Baker, all Breckenridge; veins all fissures three feet wide each, pay streaks from two to ten inches of galena, copper sulphurets, gray copper, and quartz, assaying from forty to fifty ounces silver per ton; developments—two shafts fifteen and twenty-six feet deep, two open cuts fifteen feet long, and seven tunnels thirty feet in length each.

**Silver Glance Mining and Tunneling Company (The).**—Incorporated under the laws of Colorado, April 2, 1881; capital stock $4,000,000, in 400,000 shares of $10 each, non-assessable; president, Hon. T. M. Patterson; secretary, S. F. Powell; treasurer, V. D. Markham—all Denver; financial agent, S. P. Conger, Argentine; offices 380 Lawrence street, Denver, and Argentine; owns nine claims, 150x1500 feet each, viz.: Dianthe, Dianthe, Nos. 1, 2, and 3, Sam Patterson, Susan, Cottonwood Spring, Delta, and Birdie Hill; situated on the north slope of Dianthe Mountain, beginning at Argentine and running one mile south; located in May, 1879, and in process of patent; vein a fissure twenty-five feet wide, with two pay streaks aggregating forty inches, containing quartz carrying pockets of a black sulphuret ore, milling, when sorted, from 50 to 150 ounces silver and three-fourths ounce gold per ton; developed by two tunnels 164 and 120 feet long, respectively, and twenty-one shafts from ten to fifty feet in depth; output $7,000; and owns Iron Carbonate, 150x1500 feet; situated in Illinois Park, one mile south-east of Breckenridge; located in April, 1880; vein a fissure six feet wide of iron carbonates in porphyry, milling forty per cent iron; developed by one eleven-foot shaft; surrounding this property is a placer of eighteen acres, owned by the Company, as well as 237 acres of placer ground (four claims), situated at the foot of Dianthe Mountain, on the bars south of Indiana Gulch, and extending to the Blue River; located in April, 1880; developed by 200 feet of fluming and one discovery shaft on each twenty acres from ten to twenty feet in depth.

**Silver Head.**—150x1500 feet; situated on the south slope of Mineral Hill, one-half mile from Breckenridge, and located in 1880; owners Jos. F. Reeder, Samuel W. Jones, and Jno. M. Breeze, all Breckenridge, J. C. Orrick, St. Louis, and J. K. Russell, Richview, Ills.; vein a fissure two feet wide, pay streak five inches, containing galena and porphyry, assaying $25 per ton; developed by one shaft forty feet deep.



**Silver King.**—150x1500 feet; situated on the east slope of Bald Mountain, seven miles from Breckenridge, and located in August, 1879; owners Robert Schmeling, Breckenridge, and J. Fairfield and others, Denver; vein a vertical fissure fifteen feet wide, pay streak from fifteen to twenty-five inches of galena, chlorides, and quartz, assaying from 50 to 150 ounces silver per ton; developed by one tunnel thirty feet long.

**Silver King.**—Owned by John N. Matteson and W. K. Taylor, both Kokomo; claim 1500x150 feet; situated on the north-west slope of Jacque Mountain, Ten-mile district, two miles from Kokomo, and located in August, 1882; vein a fissure three and one-half feet wide, containing gold and silver quartz and carbonates, assaying fifty ounces silver per ton; developed by an eleven-foot incline and a fifteen-foot shaft.

**Silver King Mining Company (The).**—Incorporated under the laws of New York, in 1880; capital stock $1,000,000, in 500,000 shares of $2 each, non-assessable; president, Ruloff Lyles; vice-president, Chas. Gregory; secretary, Wm. F. Dana; treasurer, D. Knowlton—all New York City; financial agent, Jno. C. Davis; manager at mines, E. L. Doyle—both Montezuma; offices 60 Broadway, New York, and at Montezuma; owns the Silver King, 150x1500 feet; situated on the south-east slope of Glacier Mountain, one-fourth mile from Montezuma, Snake River district; located in July, 1880, and patented in 1881; vein a fissure from five to thirty feet wide, pay streak from eight to eighty inches, containing galena, gray copper, and ruby and native silver, in a quartz gangue, milling, when sorted, fifty-five per cent lead and from 50 to 100 ounces silver per ton; developed by three drifts, 155, 460, and 600 feet long, with connecting winzes aggregating 170 feet, and other workings; output per day, five tons. A dividend of $50,000 was paid in August, 1881, since which time the money accruing from the output has been used in developing the property.

And owns a stamp-mill, erected on a five-acre mill site adjoining the mine; building 30x70 feet, containing ten Stamps, Blake Crusher, and Concentrators; motive power supplied by a thirty-horse-power engine and boiler, the latter furnished with water by a Knowles Pump, ore-houses, and other buildings.

**Silver Lakes.**—(See Pacific and Silver Lakes.)

**Silver Leaf Group.**—Owned by J. A. Barrock, Wm. Herwig, and Wm. Hobbs, all Montezuma; group comprises the Silver Leaf, Eclipse, and Morning Star lodes, 1500x150 feet each; situated on the north slope of Bear Mountain, three-fourths mile from Montezuma, Snake River district; located May 1, 1882; veins all fissures from two to eight feet in width, pay streaks from six to nine inches, containing galena in a quartz gangue, milling, when sorted, from five to fifty per cent lead and from twenty to twenty-five ounces silver per ton; developed by three shafts, one on each claim, twenty-five, sixteen, and thirty feet in depth, and a thirty-eight-foot tunnel on the Silver Leaf.

**Silver Leaf.**—Owned by H. J. Robbins and R. C. Benight, both Montezuma; claim 1500x150 feet; situated on the south-east slope of Glacier Mountain, two miles from Montezuma, Snake River district; located in June, 1881; vein a fissure five feet wide, pay streak seven inches, containing quartz, galena, and gray copper, assaying from 50 to 350 ounces silver per ton; developed by a thirty-foot tunnel.

**Silver Leaf and Bright Star of Hope.**—Two claims, 150x1500 feet each; situated on the south slope of Humbug Hill, one mile from Lincoln, Avalanche district; located in March, 1879; owners Thos. Smith and F. McQueary, both Lincoln; vein a vertical fissure three feet wide, containing

quartzite, carrying gold and silver, milling $16 per ton; developments—three shafts, ten, sixteen, and twenty feet deep, and one twelve-foot open cut.

**Silver Ledge.**—Owned by T. R. Newman and John G. and A. G. Gray, all Montezuma; claim 1500x150 feet; situated on the north slope of Glacier Mountain, Snake River district, one-fourth mile from Montezuma; located in March, 1881; vein a fissure two feet wide, pay streak nine inches, containing quartz and black sulphurets, milling, when sorted, from 100 to 600 ounces silver per ton; developed by a forty-foot cross-cut, a twenty-foot drift on the vein, and a fifteen-foot shaft; output six tons.

**Silver Ledge Consolidated Mining Company (The).**—Incorporated under the laws of Pennsylvania, in 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, G. A. Benson; secretary, Price Janeway; treasurer, Isaac R. Childs—all Philadelphia; office 125 South Third street, Philadelphia, and at Decatur; owns four claims, 1500x150 feet each, viz., Silver Ledge, Silver Queen, Transylvania, and Ruby Mountain; the first three situated on the west slope of McLellan Mountain, and the last on the east slope of Ruby Mountain, three miles from Decatur, Peru district; located in 1880, and the two former patented, respectively, in 1881 and 1882; veins all fissures from one to twenty feet wide, pay streaks from six to fifty inches, containing galena, zinc, and iron, in a quartz gangue, milling, when sorted, thirty-two per cent lead and fifty ounces silver per ton, the ore in the Silver Queen running somewhat higher; developments—five levels, 230, 500, 350, 85, and 50 feet long, respectively, one fifty-foot shaft, and one ten-foot adit, and other workings; improvements—ore-house, boarding-house, etc.; output 350 tons, mostly on the dumps.

**Silver Mountain Tunnel Mining and Milling Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Wm. Quayle; secretary, Wm. D. Todd—both Denver; office 14 Tabor Block, Denver, and at the mines; owns the Silver Mountain Tunnel site, 3000x6 feet; situated on the north-west slope of Silver Mountain, Peru district, one-half mile from Chihuahua; on which a tunnel is driven 175 feet, cutting one fissure vein, from five to fifteen feet wide, pay streak from two to eight inches, containing galena and quartz, assaying from 50 to 300 ounces silver per ton, and developed by two drifts twenty-five and thirty-five feet in length. On this vein a location (the Libbie, 150x1500 feet) has been made. The tunnel is designed to cut other veins known to exist in its direct course, and mainly those of the Runnion Group, four claims, 150x1500 feet each, viz., Chief of the West, Sailor Boy, Boss G., and Silver Dollar; veins all fissures, varying in width, and containing quartz, galena, and gray copper, assaying from 50 to 300 ounces silver per ton.

**Silver Ore Group.**—Four claims, viz.: Silver Ore, Green Copper, Bright Light, and Cross; situated on Lenawee Mountain, six miles from Decatur, Peru district; located in 1880; owner T. J. Laney, Decatur; veins all fissures from one to two feet wide, pay streaks one to two inches of galena, copper, and quartz, assaying ten per cent lead, ten per cent copper, and from 25 to 500 ounces silver per ton; developed by five adits from twenty to twenty-five feet long, and one seventy-five-foot cross-cut.

**Silver Prince.**—150x1500 feet; situated on the south-west slope of Lake Point, one and one-half miles from Rexford, North Swan district, and located in August, 1882; owners Daniel Patrick, W. H. Shaw, Wm. Galbraith, John King, and Henry Braden, all Rexford; vein a fissure three feet wide, pay streak ten inches, containing honey-combed quartz, carrying gold and silver, assaying from $50 to $75 per ton; developed by one shaft ten feet deep and one tunnel fifty feet long.



**Silver Prince and Continental.**—Owned by E. L. Doyle, Montezuma; claims 1500x150 feet; situated on the west slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma; located September 14, 1881, and in process of patent; vein a fissure from thirty to fifty feet in width, and pay streak from six to twenty inches, containing galena and gray copper in a quartz gangue, milling, when sorted, fifty per cent lead, five per cent copper, and sixty-five ounces silver per ton; developed by two drifts sixty-five and thirty feet in length, and other workings.

**Silver Queen.**—Wm. Miller, Monticello, Ky., and H. Hay, Kansas; claim 1500x150 feet; situated on the west slope of Keifer Mountain, Ten-mile district, two miles from Wheeler, and located in September, 1879; vein a fissure five feet wide, pay streak five inches, containing galena and gold quartz, assaying twenty-five per cent lead, sixty ounces silver, and from one to three ounces gold per ton; developed by a twenty-five-foot incline.

**Silver Queen and Caribou.**—Owned by G. W. Kesler, Decatur, C. A. Peavy, Denver, and others; claims 1500x150 feet each; situated on the west slope of Ruby Mountain, at Decatur, Peru district, and located April 4 and June 9, 1881; veins both fissures, in the former five feet wide, pay streak twelve inches, containing quartz, galena, and iron pyrites, assaying from twenty-five to forty ounces silver per ton, and developed by a forty-foot tunnel; and in the latter three feet wide, pay streak eight inches, containing quartz and galena, assaying from fifty to seventy-five ounces silver per ton; developed by a fifteen-foot tunnel.

**Silver Queen and Seven-Thirty.**—Owned by G. W. Griffiths, J. J. Hostetter, W. A. Harris, and C. F. Bacon, all Dyerville; claims 1500x150 feet each; situated on the south slope of Bald Mountain, seven miles south-east of Breckenridge; located in August, 1880, and patented; vein a fissure six and one-half feet wide, pay streak two feet, containing galena in a porphyry gangue, milling, when sorted, sixty per cent lead and forty ounces silver per ton; developments—a sixty-foot shaft and a twenty-foot drift.

**Silver Spray.**—150x1500 feet; situated on the west slope of Slate Creek, thirty miles from Dillon, Wilkinson district; located in August, 1882; owners E. H. Gould and J. G. Smith, both Argentine; vein a fissure two feet wide, pay streak four inches, containing gray copper and quartz, assaying fifteen per cent copper and forty-two ounces silver per ton; developed by one twelve-foot-face open cut.

**Silver Star.**—Owned by Carl Anderson, Thomas Latta, and Israel May, all Kokomo; claim 1500x150 feet; situated on the south-east slope of Copper Mountain, Ten-mile district, four miles from Kokomo; located in 1879, and in process of patent; vein a fissure four feet wide, pay streak from six to twenty-two inches, containing galena in a sandstone gangue, milling, when sorted, sixty per cent lead and eighty ounces silver per ton; developed by two tunnels 80 and 200 feet in length, and other workings.

**Silver Star, Evening Star, and Silver Fox.**—Three claims, 150x1500 feet each; situated on the east slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district; the first two located in 1881, and the last in 1882; owners Charles Gerard and George Frey, both Montezuma; vein a fissure eight feet wide, pay streak four inches, containing quartz and sulphurets, milling, when sorted, from 100 to 200 ounces silver per ton; developed by a forty-foot open cut and a thirty-five-foot tunnel.

**Silver Tip.**—(See Lackawanna and Silver Tip.)

**Silver Vault, Nos. 1 and 2.**—Owned by Dr. W. R. McKeelvy and Eugene Owens, both Breckenridge; claim 1500x150 feet; situated on the north slope of Mineral Hill, three miles from Breckenridge; located in November, 1879; vein a fissure from six to seven feet wide, with two pay streaks eight and five inches, containing porphyry and galena, assaying fifty-five per cent lead and from twenty-five to fifty ounces silver per ton; developed by two shafts twenty and fifteen feet in depth and two tunnels twenty-five and fifteen feet in length.

**Silver Wave.**—Owned by D. Stettauer, Chicago, Ill.; claim 1500x 150 feet; situated on Elk Mountain, Ten-mile district, one mile from Kokomo; located in 1878, and patented in 1881; vein a contact eight feet thick, pay streak from ten to forty-four inches, containing galena and carbonates in a sandstone gangue, milling, when sorted, forty-two per cent lead and forty ounces silver per ton; developed by two inclines 60 and 375 feet in length, two shafts twenty-eight and forty feet in depth, and other workings; improvements —ore-house, shaft-house, etc.

**Silvernite.**—J. S. Smith and Daniel Kehoe, both Quandary City; claim 1500x150 feet; situated on the south-west slope of Mt. Quandary, Pollock district, four miles from Quandary; located April 10, 1882; vein a fissure three feet wide, through which are scattered sulphurets seamed with copper and galena, assaying $150 per ton; developed by a twenty-five-foot open cut and a forty-foot tunnel.

**Simpson.**—150x1500 feet; situated on the west side of the Georgetown Range, and at the head of the Middle Swan River, five miles from Swan City, Missouri district; located in 1879; owners O. E. Jackson, Breckenridge, and Geo. Baker, Lincoln; vein a fissure twenty feet wide, pay streak twelve inches, containing fine-grained galena and copper pyrites in a quartz gangue, milling, when sorted, $45 per ton in gold and silver; developed by one forty-foot tunnel and one fifteen-foot open cut.

**Sisapo Reducing Company (The).**—Incorporated under the laws of Colorado, November 1, 1880; capital stock $100,000, in 10,000 shares of $10 each; president, F. S. Young; vice-president, B. B. Lawrence; secretary and treasurer, E. W. Cramer—all Montezuma; office Montezuma; owns the Sisapo Sampling-works; situated at Montezuma, and erected on ten acres of ground owned by the Company, consisting of Sampling-building, 150x50 feet, and one story high, containing one Dodge Crusher and improved sampling machinery, motive power supplied by water; and ore-bins, capacity 250 tons, office, counting-room, and laboratory; capacity of works twenty-five tons per day—obtained from the mines in the vicinity of Montezuma, and for which the Company pay the highest prices.

**Slide.**—150x1500 feet; situated in Gold Run Basin, at Preston, three miles from Breckenridge, Union district; located in 1879; owner R. A. Sankey, Breckenridge; vein a contact (porphyry walls) ten inches wide, pay streak from three to six inches, containing galena and porphyry, assaying thirty per cent lead and twenty-five ounces silver per ton; developed by one forty-foot tunnel and one ten-foot-face open cut.

**Smelter.**—Owned by Chas. H. Oatey, Wm. Fisher, and John McCabe, all Chihuahua, and W. B. Brooks, Colorado Springs; claim 1500x150 feet; situated on the south-west slope of Lenawee Mountain, Peru district, one-fourth mile from Chihuahua; located June 30, 1880; vein a fissure two feet wide, pay streak four inches, containing quartz, galena, and yellow and gray copper, assaying forty per cent lead and from twenty-five to seventy-five ounces silver per ton; developed by a forty-five-foot shaft, a twenty-foot drift from bottom of shaft, and a twenty-five-foot cross-cut.



**Smith Placer.**—Twenty-two acres; situated in Rich Gulch, at Lincoln City; located in 1874, and patented in 1875; owned by the estate of Mrs. P. R. Smith; agent, Calvin P. Clark, Lincoln City; developed by several open cuts and reservoirs.

**Smuggler and W. P. Dunkirk.**—Owned by M. W. Wooding, Decatur; claims 1500x150 feet each; situated on Cooper Mountain, Peru district, one-fourth mile from Decatur; located in 1880-82; veins both fissures three feet wide, pay streaks from six to eight inches, containing galena and quartz, assaying 250 ounces silver per ton; developed by a thirty-foot adit.

**Smuggler No. 2 and Little Undine.**—Owned by Frank, Ralph, and Jacob Bergerman, all Robinson; claims 1500x150 feet each; situated on the south slope of Elk Mountain, Ten-mile district; located in 1881; vein a contact from two to six feet thick, containing sandstone and galena, assaying forty-two ounces silver per ton; developed by two shafts forty and fifty feet in depth and other workings.

**Snake River.**—150x1500 feet; situated on the south slope of Collier Mountain, two miles from Chihuahua, Peru district; located in June, 1882; owner J. A. Johnson, Chihuahua; vein a fissure five feet wide, with pay streaks from one to four inches wide, containing galena and brittle silver in a quartz gangue; developments—one cross-cut tunnel sixty feet long and other workings.

**Snake River and Morning Star.**—Two claims, 150x1500 feet each; situated on the west slope of Silver Mountain, three-fourths mile from Chihuahua, Peru district, and located in 1880 and 1882; owner Philip Runyon, Chihuahua; veins both fissures from six to twelve inches wide, containing bismuth, galena, and quartz, assaying from twenty to fifty ounces silver per ton; developments—on the former one tunnel 120 feet long, and on the latter one drift 250 feet long on the vein, and other workings.

**Snake River Mining Company (The).**—Incorporated under the laws of Colorado, March 27, 1883; capital stock $1,000,000, in 100,000 shares of $10 each, non-assessable; president and treasurer, J. S. Way; secretary, A. H. Dake—both Denver; owns Rosalie and Cascade, 150x1500 feet each; situated on the north spur of Teller Mountain, three and one-half miles from Montezuma, and located in 1882; veins both fissures, in the former five feet wide, pay streak eleven inches of free-milling metallic silver, probably milling $50 per ton; developed by one shaft 100 feet deep and two ten-foot drifts, and on the latter assessment work.

**Snetzer.**—150x1500 feet; situated at the head of Willow Creek, seven miles from Frisco, Wilkinson district, and located in August, 1879; owners C. J. Whitaker, J. S. Scott, and C. T. Bell, all Frisco; vein a fissure five feet wide, pay streak nine inches, containing galena and quartz, assaying four per cent lead and fifteen ounces silver per ton; developed by one tunnel thirty feet long.

**Snow-bank Group.**—Owned by Charles S. and David Stettaur, both Chicago, and Levi Wilson, L. D. Smith, and Edward Fenlon, all Leavenworth, Kas.; manager, Wm. Gleason, Kokomo; group comprises eight claims, viz.: Snow-bank, Michigan, Montour, Howard, Hiawatha, Wannette, Hidden Treasure, and Lady Mollie, covering thirty-six acres, mainly patented; situated on the east slope of Sheep Mountain, Ten-mile district, three-quarters mile from Kokomo; vein a contact seven feet thick, containing carbonates and galena in a sandstone gangue, milling, when sorted, from twenty to sixty per cent lead and from twelve to twenty-five ounces silver per ton; developed

by eight shafts from 20 to 150 feet in depth, and other workings; operated by a twenty-five-horse-power engine; output 3,000 tons.

**Snow-bird.**—150x1500 feet; situated on the west slope of Mt. Gayot, three miles from Lincoln, Avalanche district, and located in June, 1880; owners Otto and Fred H. Eckhardt, both Lincoln City, George Puterbaugh, J. M. Conway, and Wm. Kellogg, all Breckenridge, and Josiah Crotty, Peoria, Ills. vein a fissure fifteen inches wide, containing iron and copper pyrites, galena and quartz, assaying thirty per cent lead and forty-four ounces silver per ton; developed by one shaft thirty feet deep and a series of openings on the vein.

**Snow-drift.**—150x1500 feet; situated on Indiana Creek, adjoining the Warrior's Mark, seven and one-half miles south-east of Breckenridge; located in March, 1881, and patented in February, 1882; owners Geo. J. Washburn, Denver, and A. S. Hall and Jno. L. Klinefelter, both Breckenridge; veins both fissures (there are two), varying in width, pay streaks from fifteen to twenty inches and from one to four inches, the former containing quartz, gray copper, and silver glance, assaying from 250 to 750 ounces silver, and in the latter quartz, antimony, and gray-copper glance, assaying from 25 to 150 ounces silver per ton; developed by five shafts from 60 to 150 feet in depth, two tunnels 75 and 100 feet long, respectively, and drifts and inclines aggregating 200 feet in length; improvements—engine-house, containing a seventeen-horse-power engine and a hoister, and other buildings onthe property.

**Snow-drift Placer.**—Adjoining the lode claim of this name; located in 1881, and in process of patent; owners Geo. J. Washburn, Denver, A. S. Hall and Jno. L. Klinefelter, both Breckenridge; developed by 300 feet of fluming and one-fourth mile of ditching.

**Snow-flake.**—Owned by R. Morrison, P. Callan, W. H. Mitchell, and J. Anderson—all Kokomo; claim 1500x150 feet; situated on the east slope of Jacque Mountain, Ten-mile district, one and one-half miles from Kokomo; located October 9, 1879, and patented in 1882; vein a fissure six feet wide, containing galena in a sandstone gangue, milling, when sorted, forty-five per cent lead and 120 ounces silver per ton; developed by two shafts 115 and 12 feet in depth, and other workings; improvements—shaft-house and cabin.

**Sonora.**—150x1500 feet; situated at the head of Spruce Creek, six miles from Breckenridge, Pollock district; located in September, 1880; owners S. C. Whipple, Breckenridge, James Ferguson and others, Mendota, Ill.; vein a fissure four feet wide, pay streak ten inches, containing sulphurets and quartz, assaying from 50 to 100 ounces silver per ton; developed by one twenty-four-foot tunnel and one twenty-foot open cut.

**Sonora.**—Owned by J. F. Willis, Oliver Milner, and F. A. Hartwell, all Montezuma; claim 1500x150 feet; situated on the west slope of Teller Mountain, Snake River district, two and one-half miles from Montezuma, and located in March, 1882; vein a fissure eighteen feet wide, pay streak from four to ten inches, containing quartz, galena, and gray copper, assaying fifty-five per cent lead and from 25 to 100 ounces silver per ton; developed by a seventy-foot tunnel, cutting the vein at a depth of forty-five feet, and a fifteen-foot shaft, showing four inches of mineral.

**Sonora.**—150x1500 feet; situated on the west slope of Silver Mountain, one-half mile from Decatur, Peru district, and located in September, 1882; owners T. J. Kelley and T. J. Laney, both Decatur; vein a fissure five feet wide, pay streak from four to ten inches, containing mineralized quartz, assaying forty ounces silver per ton; developed by one drift sixteen feet long.

**Sophie.**—Owned by T. T. Eyre and others, Decatur; claim 1500x150 feet; situated on the west slope of Collier Mountain, Snake River district one-fourth mile from Montezuma, and located in June, 1879; vein a fissure eight feet wide, containing quartz, galena, and iron pyrites, milling, when sorted, $6.20 in gold and twenty-two ounces silver per ton; developed by a fifty-foot cross-cut and a seventy-two-foot drift on the vein from the cross-cut.



**Spotted Fawn.**—150x1500 feet; situated on the east slope of Bald Mountain, six miles from Breckenridge and two miles from Lincoln; located in September, 1881; owners James W. Allen, Jno. C. Hunter, and Chas. Gordon, all Lincoln City; vein a fissure three feet wide, containing gold-bearing quartz; developments—one ten-foot-face open cut.

**Spotted Fawn Group.**—Four claims, viz.: Spotted Fawn, Spotted Fawn Extension, Sunnyside, and Sunnyside Extension, 1500x150 feet each; owned by W. H. Iliff, Breckenridge, and J. W. Watson and Geo. C. Corning, both Denver; manager, W. H. Iliff, Breckenridge; group situated on Bald Mountain, Bald Mountain district; located in 1881, and in process of patent; vein a fissure forty feet wide, pay streak from six to thirty-six inches, containing yellow and gray copper and sulphurets in a porphyry gangue, milling, when sorted, from $100 to $200 per ton; developed by a 225-foot shaft, an eighty-foot cross-cut, and other workings; output 300 tons.

**Spotted Tail.**—(See Continental Gold and Silver Mining Company.)

**Spring Wells.**—Owned by Edward Sheppard, Adam Arzdorf, and A. E. Chase, all Kokomo; claim 1500x150 feet; situated on Fletcher Mountain and in Clinton Gulch, Ten-mile district; located in 1878; vein a contact eight feet wide, pay streak eighteen inches, containing quartz and galena, assaying twenty per cent lead, three-fourths ounce gold, and eight ounces silver per ton; developed by a twenty-five-foot open cut.

**St. Augustine Group.**—Four claims, 150x1500 feet each, viz.: St. Augustine, Mary Doherty, Sunnyside, and Great Western; situated on the east slope of Wise Mountain (Middle Swan), seventeen miles from Breckenridge, Missouri district; located in 1877; owners Jos. Reeder and Jas. Doherty, both Breckenridge; vein a fissure from six to eight feet wide, containing gold-bearing quartz, assaying from $50 to $100 per ton; developed by three tunnels, 140, 40, and 30 feet long.

**St. Cloud.**—Owned by T. E. Clery and D. W. Willey, both Montezuma, and Wm. Mendenhall, Decatur; claim 1500x150 feet; situated on the north-east slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma; located in 1873, and patented in 1881; vein a fissure from five to eight feet wide, pay streak from five to thirty inches, containing galena, gray copper, bismuth, and silver glance, in a quartz gangue, milling, when sorted, fifty per cent lead and from 25 to 3,000 ounces silver per ton; developed by a forty-foot shaft and four openings on the vein from ten to forty feet in depth; output $1,500.

**St. Joe Lode and Tunnel Site.**—150x1500 and 6x3000 feet, situated on the east slope of Glacier Mountain, one-half mile from Montezuma, Snake River district; located in 1879; owner J. F. Willis, Montezuma; vein a fissure six feet wide, pay streak ten inches, containing galena and zinc, milling, when sorted, thirty-two per cent lead and from five to thirty-five ounces silver per ton; developed by one cross-cut 260 feet long, cutting vein 240 feet in depth, and 80 feet of drifting.

**St. Julien.**—150x1500 feet; situated on the north slope of Silver Mountain, one-half mile from Decatur, Peru district; located in January, 1880; owners G. A. Domedion, Montezuma, and H. J. Domedion, Charles A.

Miller, and Louis Garrett, all Decatur; vein a fissure twelve feet wide of quartz, carrying silver and gold, assaying thirty ounces silver and two-tenths ounce gold per ton; developed by one forty-foot drift.

**St. Louis.**—150x1500 feet; situated on Sheep Mountain, one and one-half miles from Robinson, Ten-mile district; located in 1880; owners A. W. Stone and W. N. Burdick, both Leadville; vein a contact eighteen inches wide of sandstone and lead carbonates, assaying fairly; developed by an incline 100 feet long.

**St. Louis and Breckenridge Mining Company (The).**—Incorporated under the laws of Colorado, in April, 1881; capital stock $500,000, in 5,000 shares of $100 each, non-assessable; president, James O. Broadhead, St. Louis; vice-president and general manager, Allen P. Richardson, Breckenridge; secretary, Luther H. Conn; treasurer, J. W. Donaldson—both St. Louis; offices (principal) Breckenridge and (branch) 614 Chestnut street, St. Louis; owns the Gray Fox, Silver Fox, Diamond, and Julia lodes, 1500x150 feet each; situated on the crest of Mineral Hill, three and one-half miles from Breckenridge; located in August, 1880; vein a contact, in the Gray Fox four feet wide, pay streak from six to eighteen inches, containing quartz and galena, assaying from twenty-five to fifty ounces silver per ton; Gray Fox developed by a thirty-six-foot shaft, and the others by shafts from ten to twenty feet in depth; the Rocky Mountain and Vergia May lodes, 1500x150 feet each, situated on the south-west slope of Bald Mountain; located in June, 1880; vein a fissure, in the Rocky Mountain ten feet wide, containing quartz and galena, assaying $3 in gold and twenty ounces silver per ton; developed by a tunnel 230 feet long, designed to cut both these veins, and already cutting nine veins, numbered from one to nine, at depths from eighteen to eighty-five feet, supposed to be offshoots from the Rocky Mountain vein, containing a similar material; owns the Andrew Jackson and Blue Valley; located September 9, 1880, and August 7, 1881, adjoining the Rocky Mountain; developed by a thirty-foot tunnel, a ten-foot cut, and will be intersected by the tunnel being driven to cut the Rocky Mountain and Vergia May veins.

**St. Louis Boy.**—150x1500 feet; situated on the east slope of Carbonate Hill, three-fourths mile from Breckenridge; located in January, 1881; owner Jno. Gallagher, Breckenridge; vein a contact twenty-eight inches wide, containing quartz carrying gold and silver, on which a mill-run of two sacks (sorted ore), obtained from a pocket, milled over fifty ounces gold and 500 ounces silver per ton; developed by one sixty-foot tunnel and one thirty-foot shaft.

**St. Louis Group.**—Six claims, 150x1500 feet each, viz., St. Louis, Highland Lady, Highland Chief, Surprise, Anniversary, and Niagara; situated on the south slope of Independence Mountain, three miles from Warren's Station, Beaver Dam district; located in 1880 and 1881; owners H. H. and C. W. Ellwood, Thos. M. Dooley, and F. B. Wineland, all Warren's Station (Heywood P. O.); veins all fissures from two to twenty feet wide, pay streaks from five to fifteen inches, containing galena, gray copper, sulphurets, and quartz, assaying from a trace to one ounce gold and from 10 to 150 ounces silver per ton; developed by two tunnels 206 and 40 feet long, two shafts thirty-five feet deep each, an eighty-foot drift, and other workings.

**Stalwart Chief.**—150x1500 feet; situated in Brown's Gulch, one mile from Lincoln; located in September, 1880; owner Chas. A. Finding, Breckenridge, A. J. Larabee, Lincoln, Geo. W. Van Dyke, Montezuma, and Jno. W. Van Dyke, Brooklyn, N. Y.; vein a fissure, seven feet wide of quartz carrying gold and silver, milling $15 per ton; developed by one tunnel 220 feet long, one sixty-foot shaft, and other workings.



**Stand-by Mining, Milling, and Prospecting Company (The).**—Incorporated under the laws of Colorado, in August, 1881; capital stock $400,000, in 40,000 shares of $10 each, non-asesssable; president, C. A. Wallace; secretary, Thos. P. Kerwin—both Denver; treasurer, N. W. Charles, Colorado Springs; vice-president and manager, Thos. Temple, Breckenridge; office 26 Fifteenth street, Denver, and at Breckenridge; owns four claims, 150x1500 feet each, viz.: Roxie Morgan, Stand-by, Denver Boy, and Toss-up; situated on the east slope of Carbonate Hill, three-fourths mile south-west of Breckenridge; located in May, 1880; ore body appears to be a horizontal deposit, from one to two feet thick, composed of decomposed gangue, containing pockets of lead carbonates, assaying from $50 to $250 per ton in gold and silver; developed by four shafts, one on each claim, fifty-five, twenty-seven, thirty, and thirty-five feet deep, and other workings.

**Standard, Nos. 1 and 2.**—Owned by D. W. Fall, Gustave Meyers, and Chas. B. Goodrich, all Breckenridge; claims 1500x150 feet; situated on the north slope of Gibson Hill, McKay district; vein on the No. 1 a contact (porphyry and lime walls) three feet thick, pay streak fifteen inches, containing free-milling gold-bearing quartz, yielding nine ounces gold and twenty ounces silver per ton; developed by a sixty-five-foot shaft; in the No. 2 undetermined, as the shaft (eighteen feet deep) is not yet down to mineral.

**Standard Group.**—Owned by Henry Conn, Louis Ansorg, A. N. Lacoon, and J. L. Thomas, all Breckenridge; claims 1500x150 feet each; situated in Rock Creek district, twenty-six miles from Breckenridge; located in June, 1882; veins all fissures from three to four feet in width, pay streaks from three to five inches, containing quartz, copper pyrites, and galena, assaying fifty-six ounces silver per ton; developed by a twenty-five-foot tunnel and other workings.

**Star and Tip-top.**—Two claims, 150x1500 feet each; situated on the crest of the Ten-mile Range, six miles from Breckenridge; located in August, 1882; owners Jno. Gallagher, D. B. Carpenter, and Geo. Ross, all Breckenridge; veins both fissures from five to ten feet wide, pay streaks from four to twenty inches, containing lead and copper carbonates in a decomposed gangue, assaying thirty per cent lead and ten ounces silver per ton on the former, and iron and copper ore and quartz, assaying $3 in gold and twenty ounces silver per ton on the latter; developed by one twenty-five-foot shaft and one twenty-foot open cut.

**Star Mining Company (The).**—Incorporated under the laws of Michigan, in August, 1882; capital stock $2,000,000, in 80,000 shares of $25 each, non-assessable; president, Geo. W. Moore; vice-president, D. J. Campian, Jr.; secretary, A. A. Nall; treasurer, B. F. Farrington; managing director, S. C. Dawes—all Detroit; manager, A. H. Reese, Breckenridge; office Moffatt Block, Detroit, and at Breckenridge; owns two claims, 150x1500 feet each, viz., Cecil and Arthur Nall, and 160 acres of placer ground; situated on the north slope of Bald Mountain, three and one-half miles from Breckenridge; located in August, 1882, and in process of patent; vein a contact twelve feet thick, containing free-milling gold quartz, yielding $10 per ton, principally gold; developed by four tunnels from 16 to 241 feet in length, and other workings.

**Star of the West No. 2.**—Owned by Oliver Milner and T. A. Hartwell, both Montezuma; claim 1500x150 feet; situated on the west slope of Teller Mountain, Snake River district, two miles from Montezuma; located in August, 1880; vein a fissure six feet wide, pay streak from ten to fifteen inches, containing gray copper, galena, and quartz, assaying forty per cent lead, 75 to 125 ounces silver, and from one-half to one ounce gold per ton; developed by two levels forty to sixty feet in length, and other workings.

**Starlight.**—150x1500 feet; situated on the west slope Mountain, three miles east of Argentine, and located in July, 1880; owners C. J. Riley, Denver, and D. A. Eckles, Argentine; vein a vertical fissure three feet wide, containing quartz carrying gold, assaying from $75 to $100 per ton; developed by one twenty-foot shaft and one ten-foot tunnel.

**Steadman Gulch Mining and Milling Company (The).**—Incorporated under the laws of West Virginia in January, 1882; capital stock $600,000, in $30,000 shares of $20 each, non-assessable; president, T. C. Moffat; vice-president, C. Dunlap; treasurer, R. T. Devries—all Wheeling, West Virginia; secretary, R. H. Wells, Bellaire, Ohio; manager and superintendent, R. Moffat, Breckenridge; owns the Edna and Grafton lodes, 1500 x150 feet each; situated on Fredonia Mountain, six miles from Breckenridge; veins both fissures two and one-half feet in width, containing quartz streaked with galena, assaying from 25 to 100 ounces silver per ton; developed by a tunnel fifty feet long and two inclines thirty-five and forty feet in length; the Native Tunnel, 3000x6 feet, situated on Argentine Mountain, on which a tunnel is driven 180 feet, designed to cut all blind veins shown to exist in the progress of the work; the Blanch Hassey lode, 1500x150 feet, patented, and situated on the Davenport placer; developed by a forty-foot tunnel; owns a one-half interest in the Coney lode (see Coney); and also owns other claims, on which they are doing assessment work.

**Steamboat Group.**—Three claims, 1500x150 feet each; owned by B. Jones, S. E. Edwards, Fred. P. Dewey, and S. S. Horton & Co., all Decatur; claims located in July, 1881; situated on McClellan Mountain, Peru district, one and one-half miles from Decatur; vein a fissure varying in width, pay streak two feet, containing quartz, galena, and gray copper, assaying from 85 to 103 ounces silver per ton; developments—a twenty-eight-foot adit on the vein and sixty-two feet of other adits.

**Stepping-stone.**—(See S. A. W. and Stepping-stone.)

**Stettauer and Clinton Patch Placers.**—Owned by D Stettauer, Chicago; claims cover 112 acres; situated on Ten-mile Creek, Ten-mile district, and patented in July, 1882; worked by hydraulic power; the developments consisting of ditches and sluices.

**Stiles Placer.**—118 $\frac{2}{10}$ acres; situated on the north side of French Gulch, at Lincoln, and located in 1882; owned by A. K. Stiles and others, Chicago; developed by one mile of ditching, and worked by ground sluice.

**Stilson Patch Placer.**—Owned by S. J. Mower, Breckenridge; claim covers seventy acres; situated in French Gulch, one mile east of Breckenridge; located in 1862, and in process of patent; developed by the Gold Run ditch coming from the Blue River, another ditch from Negro Gulch (in both of which the owner of this property has an interest), and 3,000 feet of drifting; worked by ground sluice; production from $1 to $20 a day per man. The Myrtle Annie lode is on the surface ground of this placer. (See Myrtle Annie.)

**Storm King, Cyclone, and Hurricane.**—Three claims, 150x1500 feet each; situated on the east slope of Copper Mountain, six miles from Kokomo, Ten-mile district; located in February, 1882, and the first patented in 1882; owners J. A. McCune, R. Morrison, Perry Callon, and Richard Riley, all Kokomo; vein a contact, for the first fifty feet from ten to twenty-two inches thick, containing carbonates and decomposed matter, milling, when sorted, forty-seven per cent lead and forty ounces silver per ton, and afterwards about three feet thick, containing iron pyrites, galena, and quartz, assaying from five to forty ounces silver per ton; developments—one incline 100 feet deep on the Storm King and three shafts from fifteen to twenty feet in depth on the others.



**Streeter.**—Owned by James Streeter, Junction City, Kas., C. F. Lee, Leadville, and H. N. Chittenden, Denver; claim 1500x150 feet; situated on Glacier Mountain, Snake River district, one and one-half miles from Montezuma, and located in 1881; vein a fissure, varying in width, and containing quartz and galena, assaying $81 net per ton; developed by a twenty-foot open cut.

**Sub-Treasury.**—150x1500 feet; situated on the north slope of Mt. Quandary, six miles from Kokomo, Ten-mile district, and located in July, 1880; owners Theo. Rhoades, Columbus, O., J. N. Buchanan and D. P. Slichter, both Chicago, H. C. Bristow, Girard, Ills., and F. N. Bishop, Minneapolis, Minn.; vein a fissure forty inches wide, pay streak from ten to twenty inches, containing galena and quartz carrying gold and silver, milling, when sorted, $60 per ton; developments—three tunnels, twenty-five, thirty, and ten feet long, one twenty-five-foot shaft, a short drift, and other workings.

**Sue Howard Group.**—Six claims, 150x1500 feet each, viz.: Sue Howard, Three Brothers, Three Sisters, Hannah Jane, Jane Olive, and Little Dalie; situated on the north slope of Fryer Brothers Hill, and on the Swan River, eight miles from Breckenridge, Swan district; located in September, 1880; owner James Fryer, Baltimore, Md.; ore body appears to be a deposit, from three to six feet thick, containing lead carbonates and decomposed matter, assaying a trace of gold and from 100 to 600 ounces silver per ton; developments—on the Sue Howard one shaft 128 feet deep and 100 feet of crosscuts and levels, and on each of the others from twenty-five to seventy-five feet of shafting or inclines.

**Sultana, Diana, Hayes, and Lincoln.**—Four claims, 150x1500 feet each; situated on the west slope and at the foot of Gibson Hill, one mile from Breckenridge; located in January, 1882, and in process of patent; owner John Sensenderfer, Breckenridge; ore body appears in two deposits, or blanket veins, the upper three feet thick, pay streak three inches, containing lead carbonates, and the lower three feet thick, containing copper and iron pyrites and porphyry, assaying thirty-five per cent lead and twenty-one ounces silver per ton; developed by five tunnels from thirty to fifty feet long and other workings.

**Summit Consolidated Silver Mining Company (The).**—Incorporated under the laws of Michigan, in March, 1881; capital stock $2,000,000, in 80,000 shares of $25 each, non-assessable; president, J. D. Standish; vice-president, D. J. Campau, Jr., secretary, A. A. Nall; treasurer, B. F. Farrington—all Detroit; manager, A. H. Reese, Breckenridge; office Moffatt Block, Detroit, and Breckenridge; owns four claims, 150x1500 feet each, viz.: Holyrood, Michigan, Dundee, and ———; situated on the north slope of Bald Mountain, three and one-half miles from Breckenridge; located in September, 1880; vein a contact ten feet wide, containing free-milling gold quartz, yielding and average of $12.50 per ton; developed by seven tunnels ranging from 16 to 225 feet in length.

And has a Ten-stamp mill in course of erection, the work being done by Fraser & Chalmers, of Chicago.

**Summit County Mining and Smelting Company (The).**—Incorporated under the laws of New York in 1880; capital stock $5,000,000, in 50,000 shares of $100 each, non-assessable; president, Wm. H. Reynolds, London, England; secretary and treasurer, Geo. S. Scott, New York City; general manager, Col. A. J. Ware, Breckenridge; office Room 23 No. 5

Courtland street, New York, and at Breckenridge; owns 3,100 acres of placer ground, consisting of Mayo, Illinois, Dry, and Nigger placers, situated in the gulches of these names, emptying into French Gulch, from one to four miles from Breckenridge, and American, Humbug, Georgia, Little Georgia, and others, situated in the gulches of these names, emptying into the Swan River, eight miles from Breckenridge, and all patented in 1876; developments—twenty-one miles of wooden flume, one of which cost $125,000, twenty-five miles of ditching, two miles of sluicing, 9,000 feet of iron piping, seven Giants, six pressure-boxes, boarding-houses, cabins, mining tools, etc.; estimated outputs—Georgia Gulch $10,000,000, Illinois Gulch $400,000, American Gulch $300,000. This property was purchased by Col. A. J. Ware, Breckenridge, on January 1, 1883, and the Company ceased to exist.

**Sunny South.**—1500x150 feet; situated on the south slope of Brooks Hill, two miles from Argentine; located in 1879; owners C. McMahon, A. C. Dewees, and W. P. Norris, all Argentine, H. Riddle, Breckenridge, and Wm. Cassel; vein a fissure four feet wide, containing pockets of black sulphurets, antimonial silver, and copper carbonates, assaying $50 in gold and 100 ounces silver per ton; developed by one shaft 110 feet deep, with a ninety-foot level running therefrom, and one ten-foot drift.

**Sunrise.**—Owned by P. Powers and James Milan, both Breckenridge; claim 1500x150 feet; situated on Warrior's Mark Hill, seven miles south-east of Breckenridge; located in 1881; vein a fissure six feet wide, pay streak two inches, containing galena and quartz, assaying from $250 to $500 per ton; developed by two shafts twenty and thirty feet in depth.

**Sunrise and Janitor.**—Owned by M. L. Vance and H. D. Atchison, both Crosson, and G. M. Benedict, Fairplay; claims 1500x150 feet each; situated at head of Blue River Gulch, Pollock, district, two miles from Quandary City; located in June, 1881; vein a fissure from five to six feet wide, pay streak eighteen inches, containing quartz, galena and sulphides, assaying $40 in gold and silver per ton; developed by a forty-foot open cut and tunnel and a twenty-five-foot open cut and tunnel.

**Superior.**—Owned by J. A. Conwell, Montezuma, R. G. Buckingham, C. D. Cobb, and S. W. Treat, all Denver; claim 1500x150 feet; situated on the north slope of Glacier Mountain, Snake River district, one mile from Montezuma; located in 1874, and patented in 1881; vein a fissure five feet wide, pay streak from six to eighteen inches, containing galena, gray copper, and zinc, in a quartz gangue, milling, when sorted, thirty per cent lead and from 50 to 100 ounces silver per ton; developed by a drift on the vein 155 feet long, a sixty-five-foot shaft, and other workings.

**Sure Thing.**—150x1500 feet; situated on the Rock Creek slope of Royce Mountain, fifteen miles from Frisco, Wilkinson district; located in June, 1882; owners C. J. Whitaker, Peter Loggie, and J. S. Scott, all Frisco; vein a fissure eighteen inches wide, pay streak three inches, containing galena and quartz, assaying from 100 to 150 ounces silver per ton; developed by a ten-foot open cut and a ten-foot shaft.

**Susquehanna.**—Owned by W. T. Lewis and T. J. Laney, both Decatur; claim 1500x150 feet; situated at the head of Horseshoe Gulch, Peru district, two and one-half miles from Decatur; located in 1878; vein a fissure with crevice of four feet, pay streak from five to thirty inches, containing quartz, galena, and copper, assaying from 25 to 250 ounces silver per ton; developed by a fifty-foot shaft, a sixty-foot drift on the vein, and other workings.

**Swamp Angel Group.**—Consisting of Swamp Angel, May Queen, Mohawk Queen, Petrocio, Katharine, Juliet, Romeo, and Othello; situated on



the Brown's Gulch slope of Iron Hill, eight miles north-east of Breckenridge, Swan district; located in August, 1882, and in process of patent; owners Henry Dennison, Elizabeth, N. J., and Wm. Johns, Swan City; vein a contact (porphyry and lime walls) from two to five feet thick, pay streak from ten to twenty inches, containing galena, iron quartz, and some gray copper, assaying fifteen per cent lead, some copper, and forty ounces silver per ton; developed by eight shafts, one on each claim, from ten to forty feet in depth.

**Swan River Placer Mining Company (The).**—Incorporated under the laws of Colorado, in May, 1878; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president and general manager, Otto Eckhardt, Lincoln City; vice-president, Thos. Clague, Black Hawk; secretary and treasurer, I. B. Ward, Sunshine; offices Central City and Lincoln City; owns the Eckhardt Group, viz.: Eckhardt, Swan River, Mascott, and Middle Swan, covering from 400 to 600 acres, beginning one and one-half miles above Swan City and extending into Georgia Gulch; located in June, 1870, and in process of patent; developments—2,000 feet of fluming, a large amount of ditching, and 600 feet of tunnels and drifts, besides shafts. This property is a continuation of the once famous Georgia Gulch, and the Company owns the entire water right of the Middle and South Swan Rivers.

**Sylvan.**—(See Nigger Hill Group.)

**Tabor.**—(See H. A. W. Tabor.)

**Tabor No. 2.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district; located in July, 1881; owners Archie McDonald, Jr., and D. J. K. McDonald, both Alma; vein a fissure twenty inches wide of quartz, carrying gold, silver, and copper, assaying $60 per ton; developments—one twenty-foot tunnel.

**Tabor Sheep Mountain Mining Company (The).**—Incorporated under the laws of Colorado, in August, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, J. F. Tabor; vice-president and treasurer, J. M. Newell; secretary, J. J. McGowan—all Leadville; office Rooms 4 and 5 Boston Block, Leadville; owns eight claims, covering forty acres; situated on Sheep Mountain, Ten-mile district, one mile from Robinson; located in 1880; vein a contact varying in width, containing galena and carbonates in a sandstone gangue, yielding fairly; developed by eight shafts from twenty to sixty feet in depth, and other workings.

**Tam O'Shanter, Great Eastern, and Great Western.**—Situated on the north-west slope of Bartlett Mountain, one and one-half miles from Kokomo, Ten-mile district; located in May, 1880; owners Edwin G. Hogan and others, Kokomo; vein a contact two feet wide of porphyry, carrying silver, assaying fifteen ounces silver per ton; developments—one sixty-eight-foot incline on the first and assessment work on the others.

**Tariff Silver Mining Company (The).**—Incorporated under the laws of New York, in January, 1880; capital stock $2,000,000, in 400,000 shares of $5.00 each, non-assessable; president, Harvey Durand; vice-president, C. Theo. Liebold; treasurer, W. G. Smith. (These are the old officers, there having been no election for some time.) Office 31 Broad street, New York; owns the Tariff mine, 150x1500 feet; situated on the south slope of Cooper Mountain, one mile from Decatur, Peru district, and patented in 1873; vein a fissure five feet wide, pay streak from three to twenty inches, containing galena and gray and yellow copper in quartz, milling, when sorted, twenty per cent lead and from 100 to 250 ounces silver per ton; developed by two shafts 100 feet deep each, two cross-cuts 80 and 338 feet long, two drifts 225 and 100

feet long, and other workings; improvements—ore and shaft houses, etc.; output $30,000, but of late the property has been idle.

**Ten-mile Chief.**—(See Frisco Bell and Ten-mile Chief.)

**Ten-mile Chief.**—150x1500 feet; situated on the west slope of Gold Hill, one and one-half miles from Kokomo, Ten-mile district, and located in 1879; owners John Anderson, Recen, Peter Loggie, Frisco, and F. H. Sutherland, Colorado Springs; vein a fissure three feet wide, pay streak nine inches, containing galena, iron pyrites, and quartz, assaying twenty-one ounces silver per ton; developed by one shaft 150 feet deep.

**Terrible.**—150x1500 feet; situated on the south-west slope of Bald Mountain, four miles from Breckenridge, and located in November, 1879; owners C. Zarega, Breckenridge, and Samuel F. Farrar, Gaskill; vein a fissure, four feet wide, containing quartz through which is scattered galena, assaying from twenty-five to seventy-five ounces silver per ton; developed by one sixty-seven-foot shaft, with a ten-foot drift from the shaft, and one tunnel 110 feet long.

**Terrible Group.**—Four claims, 150x1500 feet each, viz.: Terrible, White Quail, North Star, and Silver Lake; situated on the east slope of Pacific Mountain, four miles from Breckenridge, Crystal Lake district, and located in June, 1881; owners A. A. Nall, Detroit, A. H. Reese and J. Tippett, both Breckenridge; vein a fissure forty inches wide, pay streak eighteen inches, containing quartz and sulphurets, assaying from $50 to $400 per ton in silver and lead; developed by six adits aggregating 100 feet in length and other workings.

**Terrific.**—150x1500 feet; situated at the head of the Middle Swan River, five miles from Swan City, Missouri district, and located in June, 1882; owners O. E. Jackson, Breckenridge, and Jno. Baker, Lincoln City; vein a vertical fissure four feet wide (granite walls), containing honey-combed quartz, assaying from $25 to $30 per ton in gold and silver; developed by one fourteen-foot shaft and three openings on the vein.

**Texas Star Group.**—Eight claims, 150x1500 feet each, viz.: Pilot, Crysolite, Texas Star, A. G., Tip-top, Olympic, Caribou, and Vanity Fair; situated on the north-west slope of Jacque Mountain, two miles from Kokomo, Ten-mile district, and located in 1880; owners Thos. H. Greer, Robinson, and E. C. Parr, Kokomo; vein a very wide fissure, containing twelve pay streaks from two to ix inches wide of galena in a sandstone gangue, milling, when sorted, forty per cent lead and from 50 to 300 ounces silver per ton; developed by two shafts forty-eight and eighty feet deep, two tunnels 115 and 510 feet long, one forty-foot drift, and other workings; improvements—shaft and ore houses.

**Theodora and Charlotte.**—Two claims 150x1500 feet each; situated on Kelleher Mountain, thirteen miles from Frisco, Wilkinson district, and located in October, 1881; owners Maj. W. A. Mensch, Frisco, Ebenezer Beard and H. B. Chamberlin, both Denver, E. A. Sherwood, Syracuse, N. Y., and D. W. McWilliams, New York City; vein a fissure from two to four feet wide, containing quartz, galena, and copper carbonates, assaying from 50 to 350 ounces silver per ton; developed by two open-cuts fifteen and twelve feet long.

**Thomas Moore.**—Owned by Thomas W. Boylan, James McKinnon, and Daniel McDaniels, all Breckenridge; claim 1500x150 feet; situated one and one-half miles from Dyerville, and located January 2, 1882; vein a fissure thirty feet wide, containing mineralized quartz, assaying from $3 to $75 per ton; developed by a seventy-five-foot shaft and a twenty-eight-foot drift from bottom of shaft.



**Thompson, Dallas, Sedgwick, and Jacque Mountain.**—Four claims, 300x1500 feet each; situated on Jacque Mountain, one-fourth mile from Kokomo, Ten-mile district; located in May, 1880, and in process of patent; owners Edward Hockmarck, O. H. Simons, R. St. J. Cleary, A. Hausman, and Jno. L. Reardion, all Leadville; vein a contact varying in thickness, and containing sandstone and lead carbonates; developments—four tunnels from 25 to 260 feet in length and one fifteen-foot shaft.

**Three Brothers.**—Owned by A. Sweeney, Chihuahua, Colo., Josiah Sheidler and Pat. Powers, both Ohio; claim 1500x150 feet; situated on the west slope of Gibson Hill, one and one-fourth miles from Breckenridge, and located in June, 1879; vein a fissure four feet wide, pay streak ten inches, containing porphyry and galena, assaying forty-five per cent lead and from 25 to 100 ounces silver per ton; developed by three shafts, thirty-five, twelve, and ten feet in depth, and a sixty-five-foot tunnel.

**Tiger.**—Owned by D. W. Willey and T. E. Clery, both Montezuma, and Wm. Mendenhall, Decatur; claim 1500x150 feet; situated on the crest of Glacier Mountain, one and one-half miles from Montezuma, Snake River district; located in 1872, and patented in 1881; vein a fissure eight feet wide, pay streak from two to fifty inches, containing galena and chlorides in a quartz gangue, milling, when sorted, from fifty to sixty per cent lead and from 50 to 150 ounces silver per ton; developed by six openings on the vein from six to forty feet in depth, and other workings; improvements—one shaft-house.

**Tiger Extension.**—Owned by D. W. Willey and T. E. Clery, both Montezuma, Wm. Mendenhall, Decatur, and Geo. F. Packard, Denver; claim 150x1500 feet; located in 1872, and patented; situated on the north-east slope of Glacier Mountain, one and one-half miles from Montezuma, Snake River district; vein a fissure from three to nine feet wide, pay streak from five to fifty inches, containing galena, gray copper, and chlorides, in a quartz gangue, milling, when sorted, fifty-five per cent lead and from 50 to 150 ounces silver per ton; developments—one sixty-foot shaft, one seventy-five-foot drift, and fifteen openings on the vein from five to forty feet in depth. Adjoining this claim is the Tiger Extension Mill site of five acres, owned by the same parties, and located and patented at the same time, on which is a blacksmith-shop and other buildings.

**Toledo.**—150x1500 feet; situated on the west slope of Collier Mountain, three miles from Montezuma, Snake River district, and located in January, 1881; owners John Sundrager, B. B. Lawrence, and Geo. Stroh, all Montezuma; vein a fissure three feet wide, containing galena and quartz, assaying from twenty-five to fifty ounces silver per ton; developed by one drift 130 feet long on the vein and other workings.

**Topeka and Santa Fe.**—Owned by T. J. Kelley, C. Heck, and E. M. Granger, all Decatur, J. E. Humphrey, Pueblo, and others; claims 1500x150 feet each; situated on the north slope of Revenue Mountain, Peru district, two miles from Decatur, and located May 20, 1881; vein a fissure twenty inches wide, containing bismuth quartz, assaying $30 in gold, the first-class ore 200 ounces silver and the second-class fifty ounces silver per ton; developed by one forty-foot drift on the vein.

**Tornado.**—Owned by Amos Senner, Denver, and others; agent, A. G. Hoopes; claim 1500x150 feet; situated on the Blue River slope of Peak No. 1

(Ten-mile Range), eight miles from Breckenridge; located in July, 1879; vein a fissure four feet wide, pay streak two feet, containing copper pyrites in a quartz gangue, milling, when sorted, five per cent copper and forty ounces silver per ton; developed by four open cuts from ten to fifteen feet in length and other workings.

**Treasure Trove.**—Owned by William Wilkins, Harry Farncomb, J. W. Weston, R. B. Stapp, and Samuel S. Lesher, all Breckenridge; claims 1500x150 feet; situated on the north-east slope of Bald Mountain, seven miles from Breckenridge; located in 1880; vein a contact, varying in width, containing porphyry and galena, assaying $24 per ton; developed by two shafts 20 and 112 feet in depth and other workings.

**Treasure Vault Mining Company (The).**—Incorporated under the laws of Indiana, in March, 1880; capital stock $500,000; president, J. M. Ridenour; vice-president and treasurer, G. B. Wright; secretary, O. H. Hasselman; superintendent, John B. Cleaveland; offices Indianapolis, Ind., and Grant, Colo.; owns seven claims, viz.: Treasure Vault and Glendale (adjoining on the same vein), and Israel Williams, Grand Trunk, Girard, Oscar, and Little Fred.; situated on the Warden Gulch slope of Silver Mountain, one and one-half miles south-west of Montezuma, Peru and Geneva districts (partially in Clear Creek County); veins all fissures, in the Glendale and Treasure Vault about fifteen feet wide, pay streak from ten to forty inches, containing quartz, galena, gray copper, and bismuth, assaying from 25 to 2,500 ounces silver, and milling from $20 to $700 per ton; developed by a number of shafts and openings on the vein from 10 to 120 feet in depth and other workings. The vein in the Israel Williams is wide, pay streak four inches, assaying from 50 to 2,000 ounces silver per ton; developed by a twenty-foot shaft and some other workings. The Grand Trunk is opened up by a cross-cut 100 feet long and a thirty-foot shaft, showing a large body of mineralized quartz. Three shafts, fifteen, twelve, and ten feet in depth, expose a fair material in the Oscar, and a tunnel, cutting the Girard vein twenty-five feet deep, shows a three-inch pay streak of galena and gray copper, assaying from $50 to $500 per ton. There is also the Cleaveland Tunnel site, on which a tunnel is run about 350 feet, designed to develop the entire property and to cut the Treasure Vault vein at a depth of 808 feet; improvements—shaft, ore, and boarding houses, and the property is in a position to make regular shipments.

**Treasure and Shelbyville.**—Owned by G. M. Benedict, M. L. Vance, Woods Davis, and H. D. Atchison, of Fairplay and Crosson; claims 1500x150 feet each; situated on the north slope of North Star Mountain, Pollock district; located in 1881; veins both fissures from two to four feet in width, containing quartz and galena, assaying eight to fifteen ounces silver per ton; developed by a forty-foot tunnel.

**Triangle.**—Owned by W. W. Moore and John C. Hunter, both Lincoln; claim (about four and one-half acres) situated on south slope (near top) of Humbug Hill, one mile east of Lincoln; located in October, 1879; vein a contact from five to six feet thick, containing shale quartz carrying gold; developed by a thirty-four-foot shaft.

**Triangle and Golden-edge.**—Bonded to John L. Loomis and Charles C. Parsons, both Leadville, and I. A. Rosecrans, Denver, and others; claims 1500x150 feet each; situated on the north-east slope of Sheep Mountain, one-half mile from Kokomo, Ten-mile district; located in 1880; vein a contact varying in thickness, containing carbonates in a sandstone gangue, milling, when sorted, fifteen per cent lead and twenty ounces silver per ton, and galena yielding sixty per cent lead and twenty-seven ounces silver per ton; developed by three shafts, 20, 40, and 100 feet in depth, and other workings; improvements—ore-houses and shaft-houses, and a fifteen-horse-power engine; daily shipments from four to ten tons.



**Trophy Mining Company (The).**—Incorporated under the laws of New York, in 1879; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, G. R. Blanchard; vice-president, Herbert R. Smith; secretary and treasurer, H. V. Comstock—all New York City; agent, J. C. Thompson, Robinson; offices Room 41 No. 5 Courtland street, New York City, and Robinson; owns nine claims, 150x1500 feet each, viz., Trophy, Seventy-nine, and Yellow Jacket; situated on the south slope of Sheep Mountain; and the Neusitz, Lone Dane, St. Elmo, Little Bertie, Little Aldenburg, and Arctic Light; situated on the south-east slope of Sheep Mountain, near Robinson, Ten-mile district; located in 1870, and patented in 1882; veins gashes varying in width, containing dolomite, galena, iron pyrites, and some sulphurets, yielding fairly; developments—twenty shafts from 20 to 200 feet in depth each, several drifts, and other workings.

**Trumbull.**—150x1500 feet; situated on the west slope of Bear Mountain, three and one-half miles from Argentine, McBarnes district; located in July, 1880; owners J. E. Wannamaker, Golden, and J. E. Dronberger, Argentine; vein probably a fissure, twenty feet wide in red sandstone, containing three feet of quartz carrying gray copper, assaying from 50 to 750 ounces silver per ton; developed by one sixty-foot shaft, with a thirty-foot drift running therefrom, and two open cuts forty and twenty-five feet long.

**Tryon.**—150x1500 feet; situated on the west slope of Gold Hill, one and one-half miles from Kokomo, Ten-mile district; located in June, 1882; owner Nelson Andrew, Kokomo; vein a contact forty inches thick, containing carbonates, galena, and sandstone, assaying thirty per cent lead, one to three ounces gold, and 25 to 100 ounces silver per ton; developed by one shaft eighty-four feet deep.

**Tumbler.**—150x1500 feet; situated on the north slope of Silver Mountain, one-quarter mile from Decatur, Peru district; located in September, 1881; owners Harvey Woodruff, Joseph Brunner, and H. J. Domedion, all Decatur; vein a fissure forty inches wide, pay streak fourteen inches, containing galena and quartz, assaying thirty ounces silver and a trace of gold per ton; developed by two shafts ten feet deep each and one cross-cut twenty-five feet long.

**Tunnel.**—(See Old Reliable and Tunnel.)

**Twilight.**—Owned by H. H. Brown and others, Breckenridge; claim 1500x150 feet; situated on the western slope of Nigger Hill, one mile from Breckenridge; located in December, 1881; vein a contact three feet thick, containing gold quartz, assaying from $40 to $50 per ton; developed by a tunnel sixty feet long, and other workings; output eighty tons on dumps.

**Twin Lakes.**—Owned by Sherry Garton, R. D. Burroughs, both Rexford, and A. L. Conrad, E. O. Wiers, and H. C. Stewart, all Breckenridge; claim 150x1500 feet; situated on the north slope of North Star Mountain, twelve miles from Breckenridge, Pollock district; located June, 1881; vein a fissure four feet wide, pay streak eight inches, containing galena, copper, pyrites, and quartz, assaying $40 per ton in gold and silver; developed by a twenty-five-foot tunnel on the vein.

**Two-Forty.**—(See Champion, Two-Forty, etc.)

**Two Sisters.**—Owned by Dr. M. T. Armstrong, Montezuma; claim 1500x150 feet; situated on the east slope of Lenawee Mountain, Peru district,

one mile from Chihuahua; located in October, 1881; vein a fissure twenty feet wide, containing quartz, galena, and sulphurets, assaying from 20 to 700 ounces silver per ton; developed by a twenty-foot tunnel.

**Uncle Tom.**—150x1500 feet; situated on the crest of Wannamaker Hill, one-half mile from Argentine, and located in March, 1880; owners J. E. Wannamaker, Golden, and J. E. Dronberger, Argentine; vein a fissure six feet wide, containing iron pyrites in slate, assaying from $5 to $40 in gold and ten ounces silver per ton; developed by one thirty-five-foot shaft.

**Undevois and Adirondack.**—Two claims, 150x1500 feet; situated on the north-east slope of Independence Mountain, two miles from Warren's Station, Beaver Dam district; located in July, 1881; owners F. M. Hall and Z. F. Lane, both Warren's Station (Heywood P. O.); vein a fissure seven feet wide, with galena and iron pyrites scattered through the quartz; developed by one tunnel 100 feet long and fifty feet of open cuts.

**Union.**—150x1500 feet; situated on the crest of Mineral Hill, two miles from Breckenridge, and located in 1879; owners Col. A. J. Ware, Geo. Puterbaugh, and A. D. Bullis, all Breckenridge, and M. B. Carpenter and Assyria Hall, both Denver; vein a nearly vertical contact three feet wide (lime and porphyry walls), containing galena in a porphyry gangue, milling, when sorted, from forty to fifty per cent lead, from one-half to one and one-half ounces gold, and from twenty to fifty ounces silver per ton; developed by one shaft 156 feet deep, 125 feet of levels, and other workings; improvements—shaft-house, boarding-house, cabins, etc., and a whim for hoisting; output 300 tons, and present shipments ten tons per day.

**Union Consolidation Group.**—Five claims, 150x1500 feet each, viz., Silence, Denver Boy, Union, Jennie, and Tenderfoot; situated on the west slope of Gold Mountain, one and one-half miles from Kokomo, Ten-mile district, and located in 1879; owners Michael Gagan and N. Andrew, both Kokomo, C. A. Loomis, Denver, and Warren Woods, Morrison, Ill.; vein a contact thirty inches thick, containing carbonates and galena in a decomposed gangue, milling, when sorted, fifty per cent lead and thirty ounces silver per ton; developed by five shafts from 30 to 106 feet in depth, one tunnel 530 feet long, and other workings.

**Union Mountain Silver Company (The).**—Incorporated under the laws of Colorado, August 8, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Israel May; vice-president, Edward Sheppard; secretary and treasurer, J. K. Hornish—all Denver; general manager, Carl Anderson, Kokomo; offices Room 12 Tabor Block, Denver, and Kokomo; owns the Northern Spy, Hidden Treasure, Orient, Ocean Wave, Gambetta, and Elephant, 1500x150 feet each; situated on the south-east slope of Union Mountain, Ten-mile district, and located August 8, 1881; vein a contact from four to fourteen feet in thickness, containing copper and galena in a sandstone gangue, milling, when sorted, fourteen per cent copper and fourteen ounces silver per ton; developed by six shafts from ten to thirty feet in depth and other workings.

**Unknown.**—150x1500 feet; situated on the south slope of Silver Mountain, three-fourths of a mile from Decatur, Peru district, and located in March, 1882; owners H. J. Domedion, C. A. Miller, and J. A. Russell, all Decatur, and G. A. Domedion and Louis Garrett, both Montezuma; vein a fissure four feet wide, pay streak thirteen inches, containing quartz carrying black sulphurets, assaying from 50 to 500 ounces silver per ton; developed by one tunnel thirty feet long.



**Upper Ten.**—Owned by C. E. Comstock and A. E. Burgess, both Breckenridge, and J. H. McElhaney, Denver; claim 1500x150 reet; situated on the north-east slope of Bald Mountain, seven miles from Breckenridge, and located in September, 1881; vein a contact six feet thick, containing copper pyrites and gray copper in a porphyry gangue, milling, when sorted, $40 per ton in gold, silver, and copper; developed by a sixteen-foot tunnel and an open cut fifteen feet long and twenty feet wide.

**Vega.**—150x1500 feet; situated on the south-east slope of Jacque Mountain, one mile from Kokomo, Ten-mile district, and located in 1882 owners C. J. Miller, Frank Olson, and Overton Howard, all Kokomo; vein fissure forty inches wide, containing streaks of quartz, galena, and sulphurets developments—one twelve-foot shaft and one incline fifty feet deep.

**Victoria.**—150x1500 feet; situated on the south slope of Wannamaker Hill, one-fourth of a mile from Argentine; located in May, 1881; owners W. N. Whisler and C. W. Bates, both Argentine; vein a fissure four feet wide, pay streak eleven inches of quartz carrying gold, copper pyrites and copper glance, assaying thirty per cent copper, one ounce gold, and fifty-five ounces silver per ton; developed by one shaft thirty-five feet deep, and the vein is also cut by the Lake Shore Mining Company's tunnel at a greater depth, showing better mineral than above described.

**Victoria.**—150x1500 feet; situated on the north slope of North Star Mountain, Pollock district; located in June, 1882; owner Archie McDonald, Jr., Alma; vein a fissure from two to three feet wide, pay streak fourteen inches of quartz carrying gold, silver, and copper, assaying $70 per ton; developments—one fifteen-foot tunnel.

**Virgin Queen.**—150x1500 feet; situated on the west slope of Nigger Hill, two and one-half miles from Argentine; located in August, 1882; owner C. J. Riley, Denver; vein probably a contact, varying in thickness, a shaft ten feet deep showing lead carbonates. There is a shaft-house and cabin on the claim.

**Vulcan Smelting and Mining Company (The).**—Incorporated under the laws of Colorado, February 9, 1882; capital stock $5,000,000, in 500,000 shares of $10 each, non-assessable; president, Hon. J. K. Hornish; vice-president, Hon. W. A. H. Loveland; secretary, Edward Reed; treasurer, Israel May—all Denver; mill superintendent, W. S. McNair, Kokomo; offices No. 12 Tabor Block, Denver, and Kokomo, Colo.; owns a smelting works, situated at Kokomo; main building 50x40 feet, containing a reverberatory gas furnace (McNair patent) and other machinery; roasting building 50x40 feet, containing machinery for desulphurizing; crushing and pulverizing house, 60x40 feet, containing improved crushing machinery; capacity eighty tons per day. These works are not running, but the same machinery is in successful operation at Golden.

**W. P. Dunkirk.**—(See Smuggler and W. P. Dunkirk.)

**Wall Street.**—Owned by Thomas Earley and C. T. Bellamy, both Georgetown; claim 1500x150 feet; situated on Cooper Mountain, Peru district, at Decatur; located in 1879; vein a fissure eight feet wide, pay streak from three to twelve inches, containing quartz, galena, and iron pyrites, assaying from 75 to 100 ounces silver per ton; developed by an adit 150 feet long, and other workings.

**Walter R.**—150x1500 feet; situated on the south-east slope of Sheep Mountain, one-half mile from Robinson, Ten-mile district; located in January, 1882; owners James T. Stewart, D. R. McNamara, and W. M. Bickford, all

Robinson, and Thos. O'Hara, Wy. T., and others; vein a fissure thirty inches wide, containing quartz and galena, showing fairly; developments—one twelve-foot shaft.

**War Eagle Tunnel.**—Owned by J. F. Willis and others, Montezuma; site 3000x6 feet; situated on the west slope of Glacier Mountain, Snake River district, one and one-half miles from Montezuma, and located in March, 1880; on which a tunnel is driven 550 feet, cutting three veins, on which locations have been made, 1500x150 feet each, viz., General Hooker and Silver Chief, in 1880, and Peerless in 1882; veins all fissures, in the first four feet wide, pay streak five inches, containing quartz, gray copper, and galena, assaying from 50 to 300 ounces silver per ton; developed by a seventy-five-foot upraise and a seventy-five-foot drift from the tunnel; in the second seven feet wide, pay streak from twenty to thirty-six inches, containing galena and zinc in a quartz gangue, milling, when sorted, forty per cent lead and seventy-five ounces silver per ton; developed by an eighty-foot drift; and in the third, cut at depth of 405 feet, four feet wide, pay streak from ten to eighteen inches, containing galena, gray copper, and ruby silver in quartz, milling, when sorted, from five to forty per cent lead and from 25 to 250 ounces silver per ton; developed by a ninety-foot drift. The tunnel is being run to cut the Mark Twain lode.

**Warrior's Mark Mining Company (The).**—Incorporated under the laws of Colorado, in June, 1881; capital stock $3,000,000, in 300,000 shares of $10 each, non-assessable; president, George Puterbaugh; vice-president, J. A. Cammett; secretary, J. M. Conway; treasurer, Wm. Kellogg—all Breckenridge; owns nine claims, viz.: Warrior's Mark, Ætna, Queer Name, Queer Name No. 2, and Casandra Nos. 1, 2, 3, 4, and 5, 1500x150 feet each, and Warrior's Mark No. 2 (fractional); situated on the west side of Indian Gulch, one-half mile from Dyerville, seven miles from Breckenridge; located in 1880, and patented in 1881–82; veins probably fissures, in the Warrior's Mark vertical and twenty-five feet wide at the surface, with a number of pay streaks from two to fifty inches, containing gray copper in a porphyry gangue, the first-class ore milling, when sorted, twenty-five per cent copper and from 500 to 1,000 ounces silver, the second-class from five to ten per cent copper and from 50 to 250 ounces silver, and the third-class from five to fifty ounces silver per ton, and in the other claims a similar ore gangue and vein-matter; the Warrior's Mark developed by an open cut thirty-five feet long, thirty feet deep twenty-five feet wide, two shafts fifty-five and sixty-seven feet in depth, and other workings, and the other claims by twenty other shafts from ten to fifteen feet in depth, 2,000 feet of tunnels, and other workings; improvements—ore-houses, shaft-houses, etc.; output from the Warrior's Mark about $96,000.

And owns a concentrator, erected on the Ætna claim; building 60x40 feet, containing stop-boxes, buddles, and five Stamps, with facilities to put up ten more; motive power supplied by a thirty-five-horse-power engine and ample boiler; capacity thirty tons per day (twenty-four hours).

(These works are not a part of the Company's property, but are owned by the same parties.)

**Warrior's Mark No. 3.**—(See Diamond State Mining Company.)

**Washington.**—Owned by Isaac Ware and others, Montezuma; claim 1500x150 feet; situated on the west slope of Collier Mountain, Snake Rive; district, one and one-half miles from Montezuma; located in 1873, and in process of patent; vein a fissure four feet wide, pay streak from ten to eighteen inches, containing yellow and gray copper and sulphides in quartz, milling, when sorted, twenty per cent copper and from 100 to 200 ounces silver per ton, developed by a drift 175 feet long and other workings; improvements—shaft, ore, and boarding houses, etc.; output fifty tons.



**Washington and Hancock.**—Owned by Daniel Hanley, Breckenridge, O. H. Harker, J. B. Bissell, A. Sutton, C. S. Thomas and George Summers, all Leadville, T. M. Patterson, Denver, and others; claims 1500x150 feet each; situated on the east slope of Sheep Mountain, one-half mile from Robinson, Ten-mile district; located in January, 1880, and patented in April, 1882; vein a vertical contact thirty feet wide, containing sandstone, iron pyrites, and galena, assaying from 50 to 250 ounces silver per ton; developed by two shafts 134 and 145 feet in depth, one 175-foot incline, and other workings.

**Washington Property.**—(See Watson, Corning & Co.'s Property.)

**Washington Tunnel Company (The).**—Incorporated under the laws of Colorado, March 4, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, F. D. Clark, Denver; vice-president, Wm. M. Crilly, Chicago; secretary and treasurer, Marion Bowen, Denver; superintendent, R. Kinsell, Decatur, Colo.; offices 199 Fifteenth street, Denver, and Decatur; owns the Washington Tunnel site, 3000x6 feet; situated on the south slope of Cooper Mountain, Peru district, three-fourths mile from Chihuahua, and located March 4, 1881; on which a tunnel is driven 175 feet, cutting two veins, on which two locations have been made, 1500x150 feet each: first, Columbus, vein a fissure ten feet wide, pay streak from ten to eighteen inches, containing gold and silver quartz, assaying one-half ounce gold and forty-two ounces silver per ton; and second, Bowen, vein a fissure three feet wide, pay streak four inches, containing galena and quartz, assaying twenty-five per cent lead and twenty ounces silver per ton, and designed to cut four other well known veins; improvements—boarding-house, etc.

**Watertown and Lake.**—Two claims, 150x1500 feet each; situated at the head of Meadow Creek, six miles from Frisco, Ten-mile district, and located in September, 1879, and August, 1880; owners C. J. Whitaker, C. T. Bell, and J. S. Scott, all Frisco; vein a fissure ten feet wide, pay streak six inches, containing copper and quartz, assaying fifteen per cent copper and thirty ounces silver per ton; developed by two shafts thirty and twenty feet deep.

**Watson, Corning & Co.'s Property.**—Comprising six claims, 150x1500 feet each, viz.: Washington, Atlantic, Uncle Sam, Robert Emmet, Roscommon, and ——; situated on the north-west slope of Nigger Hill; patented in 1883; veins all fissures (porphyry formation) from one to seven feet wide of porphyry, carrying gold quartz and lead carbonates, there being on the Washington lode twenty-two inches in width of lead carbonates, worth $35 per ton, and twenty inches of gold-bearing quartz, worth from $5 to $8 per ton, and the mineral in the other lodes of the same character; developed by five shafts from 40 to 300 feet in depth (aggregating about 500), and 500 feet of levels; improvements—three hoisting engines of fifty, fifteen, and fifteen horse-power, respectively, 1,500 feet of tram-way, connecting the Uncle Sam with a stamp-mill owned by the same parties, situated near the mines; building 40x90 feet, and equivalent to three stories high, containing twenty 800-pound Stamps, dropping ninety times per minute, motive power supplied by a sixty-five-horse-power engine and boiler; ore, shaft, and boarding houses, office, etc.; the Berlin placer, 230 acres, on which the above-described property and mill are situated, covering the summit of Nigger Hill; patented in 1883; developed by the Illinois and Indiana ditches, both of which cross the placer, one boom for washing, and several large tanks; and a part of Mayo and Illinois Gulches (placer ground), the former patented in 1881, and developed by 400 feet of flume and the Indiana ditch seven miles long, and the latter patented in 1883, and developed by the Illinois ditch three miles long, and one boom. There is a lode on the Mayo placer thirty feet wide, (porphyry and lime walls), containing porphyry quartz, carrying from one-

fourth to two ounces gold, and through which run veins varying in width, containing lead carbonates worth $38 per ton; developments—one 200-foot incline and 100 feet of levels; improvements—one steam hoister, shaft and ore house, etc.; output twenty tons per day of lead carbonates, the gold ore being placed on the dump to be milled; all situated in the Bevan and Minnesota districts, the South Park Railroad crossing it two and one-half miles from Breckenridge; owners J. W. Watson and George C. Corning, both Denver, and John Boylan, Breckenridge.

**Wayne.**—150x1500 feet; situated on the west slope of Keifer Mountain, five miles from Frisco, Ten-mile district; located in July, 1882; owners C. C. Warren, Warren's Station (Heywood P. O.), and Solon H. and Herbert L. Bushnell, both Rochester, N. Y.; vein a fissure four feet wide, containing quartz, iron, and galena, assaying twenty-five ounces silver per ton; developments—one ten-foot tunnel.

**Wellington.**—Owned by C. O. Linquist and J. M. Williams, both Breckenridge, and O. N. Correll, Leadville; claim 1500x150 feet; situated on the west slope of Gibson Hill, one and three-fourths miles from Breckenridge; located June 7, 1882; vein a horizontal contact from two to three feet wide, containing porphyry, yellow copper, and galena; developed by a tunnel 160 feet long and other workings.

**Wellington Group.**—Three claims, 1500x150 feet each, viz.: Wellington, Liberty, and White Fawn; owned by John M. Mairs, Breckenridge; group situated on the south slope of Mineral Hill, Bevan district; located from 1876 to 1881; veins all fissures from two to six feet wide, containing galena in a porphyry gangue, milling, when sorted, sixty per cent lead and nineteen ounces silver per ton; developed by two tunnels 180 and 210 feet in length, a thirty-five foot shaft, and other workings; output forty tons.

**Wellington Group.**—Five claims, 150x1500 feet each, viz.: Wellington, White, Little Agnes, No Name, and Baltimore; situated on the west slope of Collier Mountain, one mile from Montezuma, Snake River district; located from 1877 to 1879; owner Thos. Feeny, Montezuma; veins all fissures, in the Wellington four feet wide, pay streak twelve inches of quartz and bismuth, assaying from fifty to seventy-five ounces silver per ton, and in the others from two to seven feet wide, pay streaks from four to sixteen inches of galena and quartz, assaying from 50 to 150 ounces silver per ton; developments—two tunnels 30 and 150 feet long and some surface-working.

**West Point.**—Owned by Hal Sayr, Samuel Mischler, both Central City; claim 1500x150 feet; situated on the west slope of Nigger Hill, one and one-half miles from Breckenridge; vein a fissure four feet wide, pay streak ten inches, containing porphyry and galena; developed by two shafts thirty and fifty feet in depth.

**West Side.**—Owned by W. W. Montgomery, A. M. Parke, Augustus Wentworth, H. C. Kennedy, and Chas. Lovell, all Kokomo; claim 1500x150 feet; situated on the west slope of Fletcher Mountain, Ten-mile district, three miles from Kokomo; located in 1881, and in process of patent; vein a contact six feet thick, containing sandstone and galena, assaying one and eight-tenths ounces gold and forty ounces silver per ton; developed by a thirty-foot open cut.

**West Side.**—150x1500 feet; situated on the west slope of Red Peak, seven miles from Frisco, Wilkinson district; located in August, 1880; owner A. W. Folts, Warren's Station (Heywood P. O.); vein a fissure forty inches wide, pay streak fourteen inches of galena, gray and yellow copper, and quartz, assaying from 75 to 100 ounces silver per ton; developed by a tunnel thirty feet long.



**West Virginia Group.**—Eight claims, 1500x150 feet each, viz., West Virginia, Campaign, Laura, McM., Norris, Beryl, Jessie, United States Treasury, and Lida; owned by C. McMahan and W. P. Norris, both Argentine; claims 1500x150 feet each; situated on the west slope of Brooks Hill, one and one-fourth miles from Argentine; located in February, 1880; veins all fissures from four to six feet in width, pay streaks from six to eighteen inches, containing quartz, black sulphurets, antimonial silver, and copper carbonates, assaying an average of fifty ounces silver per ton; developed by two shafts forty and forty-five feet in depth and several twenty-foot shafts, and other workings; output ten tons.

**Wheel of Fortune.**—J. P. and B. B. Boyer and Samuel and Gust Cohen, all Fairplay; claim 1500x150 feet; situated on the south slope of Mt Quandary, Pollock district, one-half mile from Quandary City; located September 11, 1881; vein a fissure two feet wide, containing gold quartz and galena, assaying $20 per ton in gold and silver; developed by a fifty-foot incline and a fifteen-foot shaft.

**Wheel of Fortune Group.**—Four claims, 150x1500 feet each, viz.: Wheel of Fortune, Star of the West, Highland Mary, and Spare Ground; situated on Sheep Mountain, one mile from Robinson, Ten-mile district; located in 1878, and patented in 1881-2; owners H. A. W. Tabor, Denver, Chas. L. Hall, Geo. R. Fisher, Timothy Foley, and S. H. Foss, all Leadville; veins all contacts from one to five feet thick, containing galena in a sandstone gangue, the first-class ore milling, when sorted, forty per cent lead and 250 ounces silver, and the second-class (consisting of iron silicates) from 25 to 100 ounces silver per ton; developments—one forty-foot shaft, two inclines 150 and 75 feet long, about 300 feet of drifting, and other workings; output $50,000.

**Wheeler Mountain Consolidated Mining Company (The).**—Incorporated under the laws of Colorado, May 3, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, J. S. Wheeler; secretary, W. H. Bryant—both Wheeler; vice-president, Frank J. Marshall, Georgetown; treasurer, W. A. Guyselman, Breckenridge; superintendent, W. H. Burke, Wheeler; office Wheeler; owns nine claims, 1500x150 feet each, and located in 1879-80, viz.: Kelleher, J. H. Groll, W. H. Bryant, J. E. Wheeler, and Mamie B., and the Wheeler Mountain Tunnel site, 3000x6 feet; situated on the north-east slope of Wheeler Mountain, one mile from Wheeler, Ten-mile district; developments—five tunnels from ten to thirty feet in length, twenty-five feet of drifts, and one main tunnel driven on the site 180 feet, and designed for the opening up of the five claims; and Mary Raney, Lupton Boy, and Maggie, on the south-west slope of Wheeler Mountain, one mile from Wheeler; developed by three twenty-foot shafts and other workings; veins all fissures from one to twenty feet in width, containing quartz, galena, iron pyrites, and native copper, assaying from three to fifteen ounces silver and from a trace to three ounces gold per ton.

**White Quail Mining and Smelting Company (The).**—Incorporated under the laws of Colorado, in 1880; capital stock $2,000,000, in 200,000 shares of $10 each, non-assessable; president, R. H. Austin; secretary, J. Herbert Millett; treasurer, J. Henry Kershaw—all Philadelphia; manager, J. B. Lovell, Kokomo; offices north-west corner of Third and Chestnut streets, Philadelphia, and at Kokomo; owns a smelting-works, situated at Kokomo, equipped with a Flast-furnace, Blake Crushers, Baker Blower, drying-ovens, etc., motive power for the same being supplied by a thirty-five-horse-power engine and ample boiler; capacity thirty tons per day; and all necessary buildings connected therewith.

And owns the White Quail Group, four claims, 150x1500 feet; situated on the east slope of Elk Mountain, one and one-half miles from Kokomo, Ten-

mile district; located in 1878, and patented in 1881; vein a contact from four to eight feet thick, containing carbonates and galena in a sandstone gangue, milling, when sorted, from $15 to $50 per ton in silver and gold; developed by 250 feet of inclines, levels, shafts, winzes, tunnels, etc.; improvements—shaft house, ore-houses, blacksmith and carpenter shop.

**White Top.**—(See Lady Huntingdon and White Top.)

**Wichita Chief.**—Owned by E. R. Barclay, Fort Collins and Kokomo; claim 1500x150 feet; situated on the south-east slope of Jacque Mountain, Ten-mile district, one-half mile from Kokomo; located in 1879, and in process of patent; vein a contact from two to three feet thick, containing galena and sandstone; developed by a tunnel 160 feet long and a twenty-six-foot winze.

**Wild Cat.**—150x1500 feet; situated on the west slope of Gold Run Hill, one-half mile from Preston, and located in May, 1880; owners D. J. Thompson and Michael Reese, both Preston, and Frank L. Bush, Breckenridge; vein a contact forty inches wide, containing pockets of lead carbonates, assaying thirty-five per cent lead and forty ounces silver per ton; developed by two shafts forty-three and sixty feet deep, with a fifty-foot drift from the former.

**Wild Cat Group.**—Owned by G. T. Metzger, C. H. Bennett, and J. L. Deming, all Breckenridge; group comprises Wild Cat, Nos. 1, 2, and 3 lodes, 1500x150 feet each; situated on the top of Wild Cat Mountain, McBarnes district, eight miles from Breckenridge, and located in June, 1880; vein a fissure varying in width, pay streak three and one-half inches, containing gray copper and porphyry, assaying from 10 to 150 ounces silver per ton; developed by a tunnel 143 feet long, two ten-foot shafts, and a twenty-five-foot shaft.

**Wildhack.**—150x1500 feet; situated on the west slope of the Gore Range, opposite the head of South Willow Creek, eight miles from Frisco, Wilkinson district, and located in August, 1882; owner Louis A. Wildhack, Frisco; vein a fissure two and one-half feet wide, pay streak eight inches, containing gray copper, galena, and quartz, assaying fifty ounces silver per ton; developed by one ten-foot open cut and one five-foot tunnel.

**Williams and Bed-rock Placers.**—Owned by Isaac, Seth, and John Williams and John Cypherd, all Swan City, D. E. Morgan, Leadville, and the Ouray Discovery and Mining Company (see O. D. & M. Co.); claims cover 207 acres (147 and 60 acres, respectively); situated in the valley of the Swan River, extending from one mile above to one mile below Swan City, Swan district; located in 1871 and 1872, and patented in 1880; developed by one thirty-three-foot shaft and other workings. This property is valuable for its placer-gold deposits, the gravel-bed being from ten to thirty feet in thickness and unworked.

**Willis.**—150x1500 feet; situated on the south-east slope of Independence Mountain, two and one-half miles from Montezuma, Snake River district, and located in October, 1881; owners I. B. Hewitt and Christian Smith, both Decatur; vein a fissure four feet wide, pay streak nine inches, containing galena, gray copper, iron, and quartz, assaying fifty per cent lead and twenty-five ounces silver per ton; developed by one twelve-foot adit and one twenty-two-foot tunnel.

**Willis.**—Owned by C. B. Eggleston, Montezuma; claim 1500x150 feet situated on the east slope of Collier Mountain, Snake River district, two miles from Montezuma, and located in July, 1880; vein a fissure three feet wide, pay streak from two to six inches, containing bismuth quartz and galena, assaying from twenty-five to fifty per cent lead and forty ounces silver per ton; developed by a twenty-foot tunnel.



**Willow Creek Placer.**—220 acres; situated on the south side of the Blue River, eleven miles from Breckenridge, Lake district; located in 1870, and patented in 1882; owner M. Silverthorn, Breckenridge; developed by one and one-quarter miles of ditching and two open cuts. The waters from the Ryan and Salt Lake Gulches belong to this placer.

**Windsor.**—Owned by Fred. Barton, Solomon Barrett, and T. Grocladt, all Montezuma; claim 1500x150 feet; situated on the crest of Glacier Mountain, Snake River district, one and one-half miles from Montezuma, and located in June, 1882; vein a fissure varying in width, pay streak from ten to thirty inches, containing quartz, galena, and gray copper, assaying from 25 to 750 ounces silver per ton; developed by a ten-foot shaft.

**Windsor and Bill Tweed.**—Owned by Frank C. Marsh and Thomas Boylan, Breckenridge; claims 1500x150 feet each; situated on the south-west slope of Nigger Hill, one and one-quarter miles from Breckenridge, and located in 1866; vein a contact from three to nine feet thick, seamed with galena, iron and lead carbonates, milling, when sorted, from $50 to $400 per ton in gold and silver; developed by four shafts from twenty-two to sixty-five feet in depth, and five tunnels from 36 to 318 feet in length (under-ground workings aggregating 2,000 feet); output 300 tons, mainly on the dumps.

**Winefred Mining Company (The).**—Incorporated under the laws of Colorado, October 20, 1881; capital stock $500,000, in 50,000 shares of $10 each, non-assessable; president, Charles Kingsbury, Erie, Pa.; vice-president and manager, S. H. Ellis; secretary, Wellington Downing—both Robinson; treasurer, J. D. Besley, Erie, Pa.; office Robinson; owns Winefred, Winfield, and Clifford Tunnel, three claims, 150x1500 feet each; situated on the south slope of Sheep Mountain, two and one-half miles from Robinson, Ten-mile district; the first located in May, 1879, and the others in April, 1880; vein a contact five feet thick, seamed with galena and copper pyrites, assaying eighteen ounces silver per ton; developed by an eighty-foot tunnel on the last-named claim and assessment work on the others.

**Winkleman.**—150x1500 feet; situated on the east slope of Elk Mountain, one-quarter mile from Recen, Ten-mile district; located in 1879, and patented in 1881; owners August Winkleman and August Carlson, both Kokomo; vein a contact from one to four feet thick of galena and carbonates in a sandstone gangue, milling, when sorted, twenty-five ounces silver per ton; developed by one shaft 100 feet deep and other workings.

**Winning Card.**—150x1500 feet; situated on the south-west slope of Lenawee Mountain, two and one-half miles from Chihuahua, Peru district; located in July, 1882; owners W. A. and S. C. Hoskinson, and Isaac Filger, all Chihuahua; vein a fissure seven feet wide, pay streak six inches of gray copper and quartz; developed by a cross-cut thirty feet long and a drift thirteen feet long.

**Winter-green.**—Situated on the south slope of Jacque Mountain, one-quarter mile from Kokomo, Ten-mile district; located in 1881, and patented in 1882; owners S. L. Morris, Charles Anderson, and B. F. Follett, all Kokomo; vein a contact fifteen feet thick of quartz, carrying iron and copper, assaying three per cent copper and $8 in silver per ton; developed by one thirty-foot shaft and one forty-foot tunnel.

**William Penn, Cumberland, and Crown Prince.**—Three claims, 150x1500 feet; situated on the Blue River slope of North Star Mountain, twelve miles from Breckenridge, Pollock district; located in August, 1881; owners Philip Funk and Jno. Sterner, both Swan City, and Wm. Gartley, Wm. Allen, and C. B. Goodrich, all Breckenridge; veins all fissures from two to four feet wide, pay streaks from five to ten inches, containing copper pyrites and quartz, carrying gold and silver, assaying $65 per ton; developments—three ten-foot open cuts, one on each claim.

**X IO U 8.**—Owned by A. G. Hoopes and John A. Willoughby, both Breckenridge; claim 1500x150 feet; situated on the French Gulch slope of Mineral Hill, two miles from Breckenridge; patented in 1877; vein a fissure three feet wide, pay streak from three to six inches, containing galena and quartz, milling, when sorted, sixty per cent lead, twenty-five ounces silver, and $3 in gold per ton; developed by two shafts seventy and fifty feet in depth and some openings on the vein.

**Yankee Boy.**—(See Atlantic and Yankee Boy.)

**Yazoo.**—150x1500 feet; situated at the head of Meadow Creek, six and one-half miles from Frisco, Wilkinson district; located in August, 1879; owners J. S. Scott, C. T. Bell, and C. J. Whitaker, all Frisco; vein a fissure eight feet wide, pay streak three inches, containing copper and quartz, assaying fifteen per cent copper and twenty-two ounces silver per ton; developed by a tunnel thirty feet long.

**Yellow Copper Group.**—Owned by E. P. McHale, Jos. K. Wilson, and J. E. Mefford, all Chihuahua; group comprises the Yellow Copper and White Spar lodes, 1500x150 feet each; situated in Beaver Dam district, one-half mile from Loveland; located in August, 1882; vein a fissure two feet wide, pay streak from four to ten inches, containing quartz, green and yellow copper, sulphurets, and free gold, assaying from 100 to 1,500 ounces silver and some gold per ton; developed by two twelve-foot adits.

**Yellow Jacket.**—150x1500 feet; situated on the north slope of Fletcher Mountain, six miles from Breckenridge, Pollock district; located in July, 1880; owners R. A. Sankey and Abbie C. Kellogg, both Breckenridge; vein a fissure four feet wide, pay streak from two to three inches of gold, silver, and copper bearing blue quartz, assaying from $250 to $400 per ton; developed by one forty-foot tunnel and one twelve-foot shaft.

**Yellow Jacket and St. Paul.**—Owned by A. W. Etter, M. Wanner, J. A. Williams, and Wm. Woody, all Robinson; claims 1500x150 feet each; situated on the west slope of Sheep Mountain, Ten-mile district, two miles from Robinson; located in June, 1882; vein a fissure from eight to ten inches wide, containing sandstone and galena, assaying from ten to twenty ounces silver per ton; developed by a twenty-foot shaft and an eight-foot incline.

**York State.**—(See Champlain, York State, etc.)

**Young America.**—150x1500 feet; situated on Bald Mountain, six miles from Breckenridge, Bald Mountain district; located in July, 1879; owners K. D. Enterline, Chris. Keiser, and J. M. Whetstone, all Breckenridge; vein a fissure four feet wide, pay streak from ten to twenty inches, containing lead carbonates, galena, and porphyry, assaying forty-five per cent lead and thirty-eight ounces silver per ton; developments—two tunnels 75 and 140 feet long and one sixty-foot shaft.

**Zollurs Group.**—Seven claims, viz.: Zollurs, Snow-drift, Snowflake, Little Maud, Little Pearl, Godelope, and Hitchcock, 1500x150 feet each; owned by Daniel Hanley, Breckenridge; group situated on the east slope of Sheep Mountain, adjoining the Robinson mine, Ten-mile district; located in 1878, and in process of patent; vein a contact varying in width, and containing sandstone, galena, and carbonates, yielding fairly; Zollurs developed by a shaft 185 feet deep, and the others by shafts from fifteen to twenty feet in depth.



# Weld County.

**Briggs' Coal Mines.**—Henry Briggs, owner; leased to Isaac Wright, Erie; property covers forty acres; situated one-fourth mile from Erie, containing a vein, or strata, of bituminous coal five feet thick; developed by a sixty-foot shaft.

**Garfield Coal Mines.**—Owned by W. Lister, Chicago, and leased to Padfield & Jones, Erie; property covers 160 acres; situated one mile from Erie, containing a strata, or vein, of bituminous coal four feet thick; developed by 800 feet of entries and a shaft 100 feet deep; daily capacity 300 tons; yield 1,200 tons.

**Mitchell Coal and Land Company (The).**—Incorporated under the laws of Colorado; president, J. W. Richards; secretary, E. R. Standish; superintendent, H. Whiteman; offices Denver and Erie; owns 500 acres, situated one mile from Erie, containing a strata, or vein, of bituminous coal five and one-half feet thick, and developed by a shaft 100 feet deep and 2,000 yards of entries; daily capacity 400 tons.

**Stewart Coal Mines.**—Owned by Goodridge & Marfell; office 271 Seventeenth street, Denver; property covers fifty-three and one-third acres; situated one mile from Erie, containing a strata, or vein, of bituminous coal five and one-half feet thick; developed by 2,000 feet of entries, two shafts 110 and 126 feet in depth, and other workings; yield for 1882 10,000 tons.

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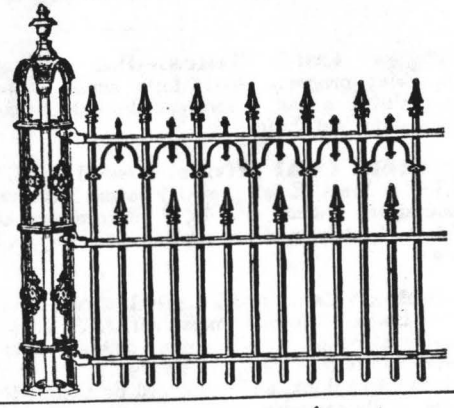
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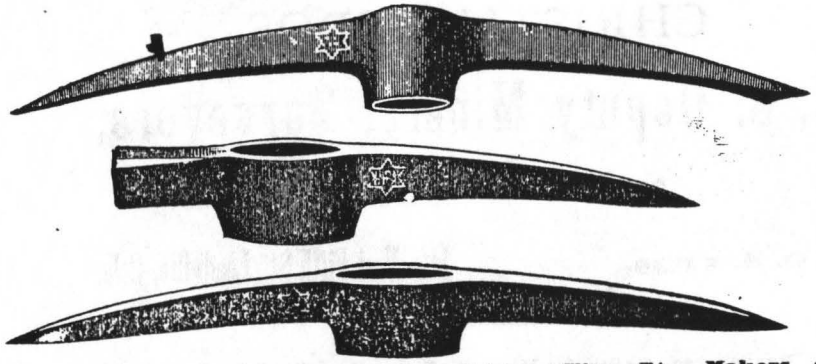
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# UNITED STATES

# MINING LAWS.

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## STATUTES.

### RESERVED FROM SALE UNDER THE PREEMPTION AND HOMESTEAD LAWS.

SEC. 386. In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law.

### LICENSE TO EXPLORE, OCCUPY, AND PURCHASE.

SEC. 387. All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs and rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

### LODE CLAIMS.

SEC. 388. Mining claims upon veins or lodes of quartz or other rock in place, bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits heretofore located, shall be governed as to length along the vein or lode by the customs, regulations, and laws in force at the date of their location. A mining claim located after the tenth day of May, eighteen hundred and seventy-two, whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface, nor shall any claim be limited by any mining regulation to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the tenth day of May, eighteen hundred and seventy-two, render such limitation necessary. The end lines of each claim shall be parallel to each other.

SEC. 390. The locators of all mining locations heretofore made or which shall hereafter be made, on any mineral vein, lode, or ledge, situated on the public domain, their heirs and assigns, where no adverse claim exists on the

tenth day of May, eighteen hundred and seventy-two, so long as they comply with the laws of the United States, and with State, Territorial, and local regulations not in conflict with the laws of the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations. But their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges. And nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim to enter upon the surface of a claim owned or possessed by another. No possessory action between individuals, in any court of the United States, for the recovery of any mining title, or for damages to any such title, shall be affected by the fact that the paramount title to the land on which such mines are, is in the United States, but each case shall be adjudged by the law of possession.

### DISTRICT RULES, LOCATIONS, AND ANNUAL EXPENDITURES.

SEC. 392. The miners of each mining district may make regulations not in conflict with the laws of the United States, or with the laws of the State or Territory in which the district is situated, governing the location, manner of recording, amount of work necessary to hold possession of a mining claim, subject to the following requirements: The location must be distinctly marked on the ground, so that its boundaries can be readily traced. All records of mining claims hereafter made shall contain the name or names of the locators, the date of the locations, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. On each claim located after the tenth day of May, eighteen hundred and seventy-two, and until a patent has been issued therefor, not less than one hundred dollars' worth of labor shall be performed or improvements made during each year: *Provided*, That the period within which the work required to be done annually on all unpatented claims, so located, shall commence on the first day of January succeeding the date of location of such claim. On all claims located prior to the tenth day of May, eighteen hundred and seventy-two, ten dollars' worth of labor shall be performed or improvements made by the first day of January, eighteen hundred and seventy-five, and each year thereafter, for each one hundred feet in length along the vein, until a patent has been issued therefor; but where such claims are held in common, such expenditure may be made upon any one claim; and where a person or company has or may run a tunnel for the purposes of developing a lode or lodes, owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, whether located prior to or since the tenth day of May, eighteen hundred and seventy-two, and such person or company shall not be required to perform work on the surface of said lode or lodes in order to hold the same as required by said act. Upon a failure to comply with the foregoing conditions of annual expenditure, the claim or mine upon which such failure occurred shall be open to relocation in the same manner as if no location of the same had ever been made: *Provided*, That the original locators, their heirs, assigns, or legal representatives have not resumed work upon the claim after failure and before such location. Upon the failure of any one of several co-owners to contribute his proportion of the expenditures required hereby, the co-owners who have performed the labor or made the improvements may, at the expiration of the year, give such delinquent co-owner personal notice in writing or notice by publication in the newspaper published nearest the claim, for at least once a week for ninety days, and if at the expiration of ninety days after such notice in writing or by publication such delinquent should fail or refuse to contribute his proportion of the expenditure required by this section, his interest in the claim shall become the property of his co-owners, who have made the required expenditures.



### CROSS LODES.

SEC. 404. Where two or more veins intersect or cross each other, priority of title shall govern, and such prior location shall be entitled to all ore or mineral contained within the space of intersection; but the subsequent location shall have the right of way through the space of intersection for the purposes of the convenient working of the mine. And where two or more veins unite, the oldest or prior location shall take the vein below the point of union including all the space of intersection.

### TUNNEL RIGHTS.

SEC. 391. Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel to the same extent as if discovered from the surface: and locations on the line of such tunnel of veins or lodes, not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

### HOW TO APPLY FOR A PATENT.

SEC. 393. A patent for any land claimed and located for valuable deposits may be obtained in the following manner: Any person, association, or corporation authorized to locate a claim under this chapter, having claimed and located a piece of land for such purposes, who has or have complied with the terms of this chapter, may file in the proper land-office an application for a patent, under oath, showing such compliance, together with a plat and field-notes of the claim or claims in common, made by or under the direction of the United States Surveyor-General, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat, previous to the filing of the application for a patent, and shall file an affidavit of at least two persons that such noticehas been duly posted, and shall file a copy of the notice in such land-office, and shall thereupon be entitled to a patent for the land, in the manner following: The register of the land-office, upon the filing of such application, plat, field-notes, notices, and affidavits, shall publish a notice that such application has been made, for the period of sixty days, in a newspaper to be by him designated as published nearest to such claim; and shall also post such notice in his office for the same period. The claimant at the time of filing this application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the United States Surveyor-General that five hundred dollars' worth of labor has been expended on improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by such reference to natural objects or permanent mon-

uments as shall identify the claim, and furnish an accurate description, to be incorporated in the patent. At the expiration of the sixty days of publication the claimant shall file his affidavit, showing that the plat and notice have been posted in a conspicuous place on the claim during such period of publication. If no adverse claim shall have been filed with the register and receiver of the proper land-office at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent, upon the payment to the proper officer of five dollars per acre, and that no adverse claim exists; and thereafter no objection from third parties to the issuance of a patent shall be heard, except it be shown that the applicant has failed to comply with the terms of this chapter. Where the claimant for a patent is not a resident of or within the land district wherein the vein, lode, ledge, or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section may be made by his, her, or its authorized agent, where said agent is conversant with the facts sought to be established; and this provision shall apply to all applications for patents for mineral lands pending on the twenty-second day of January, eighteen hundred and eighty.

ADVERSE CLAIMS.

SEC. 394.—Where an adverse claim is filed during the period of publication, it shall be upon oath of the person or persons making the same, and shall show the nature, boundaries, and extent of such adverse claim; and all proceedings, except the publication of notice and making and filing of the affidavit thereof, shall be stayed until the controversy shall have been settled or decided by a court of competent jurisdiction, or the adverse claim waived. It shall be the duty of the adverse claimant, within thirty days after filing his claim, to commence proceedings in a court of competent jurisdiction, to determine the question of the right of possession, and prosecute the same with reasonable diligence to final judgment; and a failure so to do shall be a waiver of his adverse claim. After such judgment shall have been rendered, the party entitled to the possession of the claim, or any portion thereof, may, without giving further notice, file a certified copy of the judgment-roll with the register of the land-office, together with the certificate of the surveyor-general that the requisite amount of labor has been expended or improvements made thereon, and the description required in other cases, and shall pay to the receiver five dollars per acre for his claim, together with the proper fees, whereupon the whole proceedings and the judgment-roll shall be certified by the register to the Commissioner of the General Land-office, and a patent shall issue thereon for the claim, or such portion thereof as the applicant shall appear, from the decision of the court, to rightly possess. If it appears from the decision of the court that several parties are entitled to separate and different portions of the claim, each party may pay for his portion of the claim, with the proper fees, and file the certificate and description by the surveyor-general, whereupon the register shall certify the proceedings and judgment-roll to the Commissioner of the General Land-office, as in the preceding case, and patents shall issue to the several parties according to their respective rights. Nothing herein contained shall be construed to prevent the alienation of the title conveyed by a patent for a mining claim to any person whatever.

SURVEYS TO BE ADJUSTED TO THE PUBLIC SURVEYS.

SEC. 395. The description of vein or lode claims, upon surveyed lands shall designate the location of the claim with reference to the lines of the public surveys, but need not conform therewith; but where a patent shall be issued for claims upon unsurveyed lands, the surveyor-general, in extending the surveys, shall adjust the same to the boundaries of such patented claim, according to the plat or description thereof, but so as in no case to interfere with or change the location of any such patented claim.



PATENTS FOR VEINS OR LODES ISSUED PRIOR TO MAY 10, 1872.

SEC. 396. Applications for patents for mining claims under former laws now pending, may be prosecuted to a final decision in the General Land-office; but in such cases, where adverse rights are not affected thereby, patents may issue in pursuance of the provisions of this chapter; and all patents for mining claims upon veins or lodes heretofore issued shall convey all the rights and privileges conferred by this chapter where no adverse rights existed on the tenth day of May, eighteen hundred and seventy-two.

PLACER CLAIMS.

SEC. 397. Claims usually called "placers," including all forms of deposit, excepting veins of quartz or other rock in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims; but where the lands have been previously surveyed by the United States, the entry in its exterior limits shall conform to the legal subdivisions of the public lands.

PLACER CLAIMS CONTAINING LODES.

SEC. 401. Where the same person, association, or corporation is in possession of a placer claim, and also a vein or lode included within the boundaries thereof, application shall be made for a patent for a placer claim, with the statement that it includes such vein or lode, and in such case a patent shall issue for the placer claim, subject to the provisions of this chapter, including such vein or lode, upon the payment of five dollars per acre for such vein or lode claim, and twenty-five feet of surface on each side thereof. The remainder of the placer claim, or any placer claim not embracing any vein or lode claim, shall be paid for at the rate of two dollars and fifty cents per acre, together with all costs of proceedings; and where a vein or lode, such as is described in section three hundred and eighty-eight, is known to exist within the boundaries of a placer claim, an application for a patent for such placer claim, which does not include an application for the vein or lode claim, shall be construed as a conclusive declaration that the claimant of the placer claim has no right of possession of the vein or lode claim; but where the existence of a vein or lode in a placer claim is not known, a patent for the placer claim shall convey all valuable mineral and other deposits within the boundaries thereof.

PLACER LOCATIONS.

SEC. 398. Legal subdivisions of forty acres may be subdivided into ten-acre tracts; and two or more persons, or associations of persons, having contiguous claims of any size, although such claims may be less than ten acres each, may make joint entry thereof; but no location of a placer claim, made after the ninth day of July, eighteen hundred and seventy, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States surveys; and nothing in this section contained shall defeat or impair any bona fide preemption or homestead claim upon agricultural lands, or authorize the sale of the improvements of any bona fide settler to any purchaser.

SEC. 399. Where placer claims are upon surveyed lands, and conform to legal subdivisions, no further survey or plat shall be required, and all placer-mining claims located after the tenth day of May, eighteen hundred and seventy-two, shall conform as near as practicable with the United States system of public-land surveys, and the rectangular subdivisions of such surveys, and no such location shall include more than twenty acres for each individual claimant; but where placer claims cannot be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands; and where by the segregtaion

of mineral land in any legal subdivision a quantity of agricultural land less than forty acres remains, such fractional portion of agricultural land may be entered by any party qualified by law, for homestead or preemption purposes.

PROOFS OF POSSESSORY RIGHTS—LIENS—LIMITATIONS.

SEC. 400. Where such person or association, they and their grantors, have held and worked their claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or Territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this chapter, in the absence of any adverse claim; but nothing in this chapter shall be deemed to impair any lien which may have attached in any way whatever to any mining claim or property thereto attached prior to the issuance of a patent.

MILL-SITES.

SEC. 405. Where non-mineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes, such non-adjacent surface-ground may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no locations hereafter made of such non-adjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this chapter for the superficies of the lode. The owner of a quartz-mill or reduction-works, not owning a mine in connection therewith, may also receive a patent for his mill-site, as provided in this section.

PROOF OF CITIZENSHIP.

SEC. 389. Proof of citizenship, under this chapter, may consist, in the case of an individual, of his own affidavit thereof; in the case of an association of persons unincorporated, of the affidavit of their authorized agent, made on his own knowledge, or upon information and belief; and in the case of a corporation organized under the laws of the United States, or of any State or Territory thereof, by the filing of a certified copy of their charter or certificate of incorporation.

DEPUTY SURVEYORS—CHARGES AND FEES.

SEC. 402. The Surveyor-General of the United States may appoint in each land district containing mineral lands as many competent surveyors as shall apply for appointment to survey mining claims. The expenses of the suvrey of vein or lode claims, and the survey and subdivision of placer claims into smaller quantities than one hundred and sixty acres, together with the cost of publication of notices, shall be paid by the applicants, and they shall be at liberty to obtain the same at the most reasonable rates, and they shall also be at liberty to employ any United States deputy-surveyor to make the survey. The Commissioner of the General Land-office shall also have power to establish the maximum charges for surveys and publication of notices under this chapter; and, in case of excessive charges for publication, he may designate any newspaper published in a land district where mines are situated for the publication of mining notices in such district, and fix the rates to be charged by such paper; and, to the end that the Commissioner may be fully informed on the subject, each applicant shall file with the register a sworn statement of all charges and fees paid by such applicant for publication and surveys, together with all fees and money paid the register and the receiver of the land-office, which statement shall be transmitted, with the other papers in the case, to the Commissioner of the General Land-office.



AFFIDAVITS—HEARINGS TO ESTABLISH THE CHARACTER OF LANDS.

SEC. 403. All affidavits required to be made under this chapter may be verified before any officer authorized to administer oaths within the land district where the claims may be situated, and all testimony and proofs may be taken before any such officer, and, when duly certified by the officer taking the same, shall have the same force and effect as if taken before the register and receiver of the land-office. In cases of contest as to the mineral or agricultural character of land, the testimony and proofs may be taken as herein provided, on personal notice of at least ten days to the opposing party; or if such party cannot be found, then by publication of at least once a week for thirty days in a newspaper, to be designated by the register of the land-office as published nearest to the location of such land; and the register shall require proof that such notice has been given.

WATER RIGHTS.

SEC. 407. Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed; but whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

SEC. 408. All patents granted, or preemptions or homesteads allowed, shall by subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the preceding section.

EASEMENTS.

SEC. 406. As a condition of sale, in the absence of the necessary legislation by Congress, the local legislature of any State or Territory may provide rules for working mines, involving easements, drainage, and other necessary means to their complete development; and these conditions shall be fully expressed in the patent.

HOMESTEAD AND PREEMPTION CLAIMS.

SEC. 409. Whenever, upon the lands heretofore designated as mineral lands, which have been excluded from survey and sale, there have been homesteads made by citizens of the United States, or persons who have declared their intention to become citizens, which homesteads have been made, improved, and used for agricultural purposes, and upon which there have been no valuable mines of gold, silver, cinnabar, or copper discovered, and which are properly agricultural lands, the settlers or owners of such homesteads shall have a right of preemption thereto, and shall be entitled to purchase the same at the price of one dollar and twenty-five cents per acre, and in quantity not to exceed one hundred and sixty acres; or they may avail themselves of the provisions of chapter eight, relating to "Homesteads."

SEC. 410. Upon the survey of the lands described in the preceding section, the Secretary of the Interior may designate and set apart such portions of the same as are clearly agricultural lands, which lands shall thereafter be subject to preemption and sale as other public lands, and be subject to all the laws and regulations applicable to the same.

CERTAIN STATES EXCEPTED.

SEC. 413. The provisions of the preceding sections of this chapter shall not apply to the mineral lands situated in the States of Michigan, Wisconsin, and Minnesota, which are declared free and open to exploration and purchase, according to legal subdivisions, in like manner as before the tenth day of May, eighteen hundred and seventy-two. And any bona fide entries of such lands within the States named since the tenth day of May, eighteen hundred and seventy-two, may be patented without reference to any of the foregoing provisions of this chapter. Such lands shall be offered for public sale in the same manner, at the same minimum price, and under the same rights of pre-emption as other public lands.

SEC. 414. Within the States of Missouri and Kansas, deposits of coal, iron, lead, or other mineral, are excluded from the operation of the preceding sections of this chapter, and all lands in said States shall be subject to disposal as agricultural lands.

MISCELLANEOUS.

SEC. 412. Nothing contained in this chapter shall be construed to impair, in any way, rights or interests in mining property acquired under existing laws; nor to effect the provisions of the act entitled "An act granting to A. Sutro the right of way, and other privileges, to aid in the construction of a draining and exploring tunnel to the Comstock lode, in the State of Nevada," approved July twenty-five, eighteen hundred and sixty-six.

SEC. 415. No act passed at the first session of the Thirty-eighth Congress, granting lands to States or corporations to aid in the construction of roads or for other purposes, or to extend the time of grants made prior to the thirtieth day of January, eighteen hundred and sixty-five, shall be construed as to embrace mineral lands, which in all cases are reserved exclusively to the United States, unless otherwise specially provided in the act or acts making the grant; and all mineral lands are excepted from the operation and grants of laws heretofore granting lands to the State of Colorado.

REVISED STATUTES.

SEC. 2343. The President is authorized to establish additional land districts, and to appoint the necessary officers under existing laws, wherever he may deem the same necessary for the public convenience in executing the provisions of this chapter.

## ACT OF CONGRESS OF JANUARY 22, 1880.

ANNUAL EXPENDITURE.

An Act to amend sections twenty-three hundred and twenty-four and twenty-three hundred and twenty-five of the Revised Statutes of the United States concerning mineral lands.

*Be it enacted, etc.*, That section twenty-three hundred and twenty-five of the Revised Statutes of the United States be amended by adding thereto the following words: "*Provided*, That where the claimant for a patent is not a resident of or within the land district wherein the vein, lode, ledge, or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section by the claimant for such patent may be made by his, her, or its authorized agent, where said agent is conversant with the facts sought to be established by said affidavits: *And provided*, That this section shall apply to all applications now pending for patents to mineral lands."

SEC. 2. That section twenty-three hundred and twenty-four of the Revised Statutes of the United States be amended by adding the following words: "*Provided*, That the period within which the work required to be done annually on all unpatented mineral claims shall commence on the first day of January succeeding the date of location of such claim, and this section shall apply to all claims located since the tenth day of May, anno Domini eighteen hundred and seventy-two." [See act of April 26, 1882.]



## ACT OF CONGRESS, JUNE 3, 1878.

TIMBER-CUTTING.

An Act authorizing the citizens of Colorado, Nevada, and the Territories, to fell and remove timber on the public domain for mining and domestic purposes.

*Be it enacted, etc.*, That all citizens of the United States, and other persons, *bona fide* residents of the State of Colorado or Nevada, or either of the Territories of New Mexico, Arizona, Utah, Wyoming, Dakota, Idaho, or Montana, and all other mineral districts of the United States, shall be, and are hereby, authorized and permitted to fell and remove, for building, agricultural, mining, or other domestic purposes, any timber or other trees growing or being on the public lands, said lands being mineral, and not subject to entry under existing laws of the United States, except for mineral entry, in either of said States, Territories, or districts, of which such citizens or persons may be at the time *bona fide* residents, subject to such rules and regulations as the Secretary of the Interior may prescribe for the protection of the timber and of the undergrowth growing upon such lands, and for other purposes: *Provided*, The provisions of this act shall not extend to railroad corporations.

SEC. 2. That it shall be the duty of the register and the receiver of any local land-office in whose district any mineral land may be situated, to ascertain from time to time whether any timber is being cut or used upon any such lands, except for the purposes authorized by this act, within their respective land districts; and, if so, they shall immediately notify the Commissioner of the General Land-office of that fact, and all necessary expenses incurred in making such proper examinations shall be paid and allowed such register and receiver in making up their next quarterly accounts.

SEC. 3. Any person or persons who shall violate the provisions of this act, or any rules or regulations in pursuance thereof made by the Secretary of the Interior, shall be deemed guilty of a misdemeanor, and, upon conviction, shall be fined in any sum not exceeding five hundred dollars, and to which may be added imprisonment for any term not exceeding six months.

## ACT OF CONGRESS OF JANUARY 12, 1877.

SALT AND SALINE LANDS.

An Act providing for the sale of saline lands.

*Be it enacted, etc.*, That whenever it shall be made appear to the register and the receiver of any land-office of the United States that any lands within their district are saline in character, it shall be the duty of said register and said receiver, under the regulations of the General Land-office, to take testimony in reference to such lands to ascertain their true character, and to report the same to the General Land-office; and if, upon such testimony, the Commissioner of the General Land-office shall find that such lands are saline and incapable of being purchased under any of the laws of the United States relative to the public domain, then, and in such case, such lands shall be offered for sale by public auction at the local land-office of the district in which the same shall be situated, under such regulations as shall be prescribed by the Commissioner of the General Land-office and sold to the highest bidder for cash at a price not less than one dollar and twenty-five cents per acre; and in

case said lands fail to sell when so offered, then the same shall be subject to private sale, at such land-office, for cash, at a price not less than one dollar and twenty-five cents per acre, in the same manner as other lands of the United States are sold: *Provided*, That the foregoing enactments shall not apply to any State or Territory which has not had a grant of salines by act of Congress, nor to any State which may have had such a grant, until either the grant has been fully satisfied, or the right of selection thereunder has expired by efflux of time. But nothing in this act shall authorize the sale or conveyance of any title other than such as the United States has, and the patents issued shall be in the form of a release and quitclaim of all title of the United States in such lands.

SEC. 2. That all executive proclamations relating to the sales of public lands shall be published in only one newspaper, the same to be printed and published in the State or Territory where the lands are situated, and to be designated by the Secretary of the Interior.

## REVISED STATUTES.

### COAL LANDS.

SEC. 2347. Every person above the age of twenty-one years, who is a citizen of the United States, or who has declared his intention to become such, or any association of persons severally, qualified as above, shall, upon application to the register of the proper land-office, have the right to enter by legal subdivisions any quantity of vacant coal lands of the United States not otherwise appropriated or reserved by competent authority, not exceeding one hundred and sixty acres to such individual person, or three hundred and twenty acres to such association, upon payment to the receiver of not less than ten dollars per acre, for such lands where the same shall be situated more than fifteen miles from any completed railroad, and not less than twenty dollars per acre for such lands as shall be within fifteen miles of such road.

SEC. 2348. Any person or association of persons severally qualified as above provided, who have opened and improved, or shall be in actual possession of the same, shall be entitled to a preference-right of entry under the preceding section, of the mines so opened and improved: *Provided*, That when any association of not less than four persons, severally qualified as above provided, shall have expended not less than five thousand dollars in working and improving any such mine or mines, such association may enter not exceeding six hundred and forty acres, including such mining improvements.

SEC. 2349. All claims under the preceding section must be presented to the register of the proper land district within sixty days after the date of actual possession and the commencement of improvements on the land, by the filing of a declaratory statement therefor; but when the township plat is not on file at the date of such improvement, filing must be made within sixty days from the receipt of such plat at the district office, and where the improvements shall have been made prior to the expiration of three months from the third day of March, eighteen hundred and seventy-three, sixty days from the expiration of such three months shall be allowed for the filing of a declaratory statement, and no sale under the provisions of this section shall be allowed until the expiration of six months from the third day of March, eighteen hundred and seventy-three.

SEC. 2350. The three preceding sections shall be held to authorize only one entry by the same person or association of persons; and no association of persons, any member of which shall have taken the benefit of such sections, either as an individual or as a member of any other association, shall enter or hold any other lands under the provisions thereof; and no member of any association which shall have taken the benefit of such sections shall enter or hold any other lands under their provisions; and all persons claiming under section twenty-three hundred and forty-eight shall be required to prove their respective rights and pay for the lands filed upon within one year from the time prescribed for filing their respective claims; and upon failure to file the proper notice or to pay for the land within the required period, the same shall be subject to entry by any other qualified applicant.



SEC. 2351. In case of conflicting claims upon coal lands where the improvements shall be commenced after the third day of March, eighteen hundred and seventy-three, priority of possession and improvement, followed by proper filing and continued good faith, shall determine the preference-right to purchase. And also where improvements have already been made prior to the third day of March, eighteen hundred and seventy-three, division of the land claimed may be made by legal subdivisions, to include as near as may be the valuable improvements of the respective parties. The Commissioner of the General Land-office is authorized to issue all needful rules and regulations for carrying into effect the provisions of this and the four preceding sections.

### REGISTERS' AND RECEIVERS' FEES AND COMMISSIONS.

SEC. 2238. Registers and Receivers, in addition to their salaries, shall be allowed each the following fees and commissions, namely:

1. A fee of one dollar for each declaratory statement filed and for services in acting on preemption claims.
2. A commission of one per centum on all moneys received at each Receiver's office.
3. A commission to be paid by the homestead applicant, at the time of entry, of one per centum on the cash price, as fixed by law, of the land applied for; and a like commission when the claim is finally established, and the certificate therefor issued as the basis of a patent.
4. The same commission on lands entered under any law to encourage the growth of timber on western prairies, as allowed when the like quantity of land is entered with money.
5. For locating military bounty-land warrants, issued since the eleventh day of February, eighteen hundred and forty-seven, and for locating agricultural-college land-scrip, the same commission, to be paid by the holder or assignee of each warrant or scrip, as is allowed for sales of the public lands for cash, at the rate of one dollar and twenty-five cents per acre.
6. A fee, in donation cases, of five dollars for each final certificate for one hundred and sixty acres of land, ten dollars for three hundred and twenty acres, and fifteen dollars for six hundred and forty acres.
7. In the location of lands by States and corporations under grants from Congress for railroads and other purposes (except for agricultural colleges), a fee of one dollar for each final location of one hundred and sixty acres; to be paid by the State or corporation making such location.
8. A fee of five dollars per diem for superintending public land sales at their respective offices; and, to each Receiver, mileage in going to and returning from depositing the public moneys received by him.
9. A fee of five dollars for filing and acting upon each application for patent or adverse claim filed for mineral lands, to be paid by the respective parties.
10. Registers and Receivers are allowed, jointly, at the rate of fifteen cents per hundred words for testimony reduced by them to writing for claimants, in establishing preemption and homestead rights.
11. A like fee is provided in the preceding subdivision, when such writing is done in the land-office, in establishing claims for mineral lands.
12. Registers and Receivers in California, Oregon, Washington, Nevada, Colorado, Idaho, New Mexico, Arizona, Utah, Wyoming, and Montana, are each entitled to collect and receive fifty per centum on the fees and commissions provided for in the first, third, and tenth subdivisions of this section.

LANDS NOT SUBJECT TO PREEMPTION.

SEC. 2258. The following classes of lands, unless otherwise specially provided for by law, shall not be subject to the rights of preemption, to-wit:

1. Lands included in any reservation by any treaty, law, or proclamation of the President, for any purpose.
2. Lands included within the limits of any incorporated town, or selected as the site of a city or town.
3. Lands actually settled and occupied for purposes of trade and business, and not for agriculture.
4. Lands on which are situated any known salines or mines.

TITLE TO TOWN-LOTS SUBJECT TO MINERAL RIGHTS.

SEC. 2386. Where mineral veins are possessed, which possession is recognized by local authority, and to the extent so possessed and recognized, the title to town-lots to be acquired shall be subject to such recognized possession and the necessary use thereof; but nothing contained in this section shall be so construed as to recognize any color of title in possessors for mining purposes, as against the United States.

## ACT OF CONGRESS OF MARCH 3, 1881.

SUITS AT LAW.

An Act to amend section twenty-three hundred and twenty-six of the Revised Statutes, relating to suits at law affecting the title to mining claims.

*Be it enacted, etc.*, That if, in any action brought pursuant to section twenty-three hundred and twenty-six of the Revised Statutes, title to the ground in controversy shall not be established by either party, the jury shall so find, and judgment shall be entered according to the verdict. In such case costs shall not be allowed to either party, and the claimant shall not proceed in the land-office, nor be entitled to a patent for the ground in controversy, until he shall have perfected his title.

## REVISED STATUTES.

PERJURY—PENALTY THEREFORE.

SEC. 5392. Every person who, having taken an oath before a competent tribunal, officer or person, in any case in which the law of the United States authorizes an oath to be administered, that he will testify, declare, depose, or certify truly, or that any written testimony, declaration, deposition, or certificate by him subscribed is true, willfully and contrary to such oath states or subscribes any material matter which he does not believe to be true, is guilty of perjury, and shall be punished by a fine of not more than two thousand dollars, and by imprisonment, at hard labor, not more than five years, and shall, moreover, thereafter, be incapable of giving testimony in any court in the United States until such time as the judgment against him is reversed.

## ACT OF APRIL 26, 1882. AGENT—ADVERSE CLAIM—CITIZENSHIP OF APPLICANT.

An Act to amend section twenty-three hundred and twenty-six of the Revised Statutes, in regard to mineral lands, and for other purposes.

*Be it enacted, etc.*, That the adverse claim required by section twenty-three hundred and twenty-six of the Revised Statutes may be verified by the oath of any duly authorized agent or attorney-in-fact of the adverse claimant, cognizant of the facts stated, and the adverse claimant, if residing at the time being beyond the limits of the district wherein the claim is situated, may make oath to the adverse claim before the clerk of any court of record of the United States or of the State or Territory where the adverse claimant may then be, or before any notary public of such State or Territory.

SEC. 2. That applicants for mineral patents, if residing beyond the limits of the district wherein the claim is situated, may make any oath or affidavit required for proof of citizenship before the clerk of any court of record, or before any notary public of any State or Territory. Approved April 26, 1882.



# MINING LAWS OF COLORADO.

## AN ACT CONCERNING MINES.

*Be it enacted by the Council and House of Representatives of Colorado Territory:*

SECTION 1. LENGTH.—The length of any lode claim hereafter located may equal, but not exceed fifteen hundred feet along the vein.

SEC. 2. WIDTH.—The width of lode claims hereafter located in Gilpin, Clear Creek, Boulder, and Summit Counties, shall be seventy-five feet on each side of the center of the vein or crevice; and in all other counties the width of the same shall be one hundred and fifty feet on each side of the center of the vein or crevice: *Provided*, That hereafter any county may, at any general election, determine upon a greater width, not exceeding three hundred feet on each side of the center of the vein or lode, by a majority of the legal votes cast at said election, and any county, by such vote at such election, may determine upon a less width than above specified.

SEC. 3. LOCATION CERTIFICATE.—The discoverer of a lode shall, within three months from the date of discovery, record his claim in the office of the recorder of the county in which such lode is situated, by a location certificate, which shall contain: 1st, the name of the lode; 2d, the name of the locator; 3d, the date of location; 4th, the number of feet in length claimed on each side of the center of the discovery shaft; 5th, the general course of the lode as near as may be.

SEC. 4. Any location certificate of a lode claim which shall not contain the name of the lode, the name of the locator, the date of location, the number of lineal feet claimed on each side of the discovery shaft, the general course of the lode, and such description as shall identify the claim with reasonable certainty, shall be void.

SEC. 5. DISCOVERY SHAFT AND STAKING.—Before filing such location certificate, the discoverer shall locate his claim by first sinking a discovery shaft upon the lode, to the depth of at least ten feet from the lowest part of the rim of such shaft at the surface, or deeper, if necessary to show a well-defined crevice. *Second*, by posting at the point of discovery on the surface, a plain sign or notice containing the name of the lode, the name of the locator, and the date of discovery. *Third*, by marking the surface boundaries of the claim.

SEC. 6. Such surface boundaries shall be marked by six substantial posts, hewed or marked on the side or sides which are in toward the claim, and sunk in the ground, to-wit: One at each corner and one at the center of each side line. Where it is practically impossible on account of bed-rock or precipitous ground to sink such posts, they may be placed in a pile of stones.

SEC. 7. EQUIVALENT TO A DISCOVERY SHAFT.—Any open cut, cross-cut, or tunnel, which shall cut a lode at the depth of ten feet below the surface, shall hold such lode the same as if a discovery shaft were sunk thereon, or an adit of at least ten feet in along the lode, from the point where the lode may be in any manner discovered, shall be equivalent to a discovery shaft.

SEC. 8. SIXTY DAYS.—The discoverer shall have sixty days from the me of uncovering or disclosing a lode to sink a discovery shaft thereon.

SEC. 9. CLAIM DEFINED BY THE SURFACE LINES.—The location, or cation certificates, of any lode claim shall be construed to include all surface ground within the surface lines thereof, and all lodes and ledges throughout their entire depth, the top or apex of which lies inside of such lines extended ownward, vertically, with such parts of all lodes or ledges as continue to dip eyond the side lines of the claim, but shall not include any portion of such arts of all lodes or ledges as continue to dip beyond the side lines of the claim, but shall not include any portion of such lodes or ledges beyond the end lines of the claim or end lines continued, whether by dip or otherwise, or beyond e side lines in any other manner than by the dip of the lode.

SEC. 10. If the top or apex of a lode in its longitudinal course extends eyond the exterior lines of the claim at any point on the surface, or as extended vertically downward, such lode may not be followed in its longitudinal course beyond the point where it is intersected by the exterior lines.

SEC. 11. RIGHT OF WAY AND RIGHT OF SURFACE.—All mining claims ow located, or which may be hereafter located, shall be subject to the right f way of any ditch or flume for mining purposes, or of any tram-way or pack-trail, whether now in use, or which may be hereafter laid out across any such location. *Provided, always,* That such right of way shall not be exercised gainst any location duly made and recorded, and not abandoned prior to the tablishment of the ditch, flume, tram-way, or pack-trail, without consent of e owner, except by condemnation, as in case of land taken for public highways. Parol consent to the location of any such easement, accompanied by the completion of the same over the claim, shall be sufficient without writings. *nd provided further,* That such ditch or flume shall be so constructed that the ater from such ditch or flume shall not injure vested rights by flooding or otherwise.

SEC. 12. When the right to mine is in any case separate from the ownership or right of occupancy to the surface, the owner or rightful occupant of the rface may demand satisfactory security from the miner, and if it be refused, ay enjoin such miner from working until such security is given. The order r injunction shall fix the amount of bond.

SEC. 13. RE-LOCATION BY THE OWNER.—If at any time the locator of any mining claim heretofore or hereafter located, or his assigns, shall apprend that his original certificate was defective, erroneous, or that the requirements of the law had not been complied with before filing; or shall be desirous of changing his surface boundaries, or of taking in any part of an overlapping claim which has been abandoned; or in case the original certificate was made prior to the passage of this law, and he shall be desirous of securing e benefits of this Act, such locator or his assigns may file an additional certificate, subject to the provisions of this Act. *Provided,* That such re-location oes not interfere with the existing rights of others at the time of such relocation, and no such re-location or the record thereof, shall preclude the claimant or claimants from proving any such title or titles as he or they may ve held under previous location.

SEC. 14. LABOR.—The amount of work done, or improvements made during each year, shall be that prescribed by the laws of the United States.

SEC. 15. PROOF OF LABOR.—Within six months after any set time, or annual period herein allowed for the performance of labor, or making improvements upon any lode claim, the person on whose behalf such outlay was made, some person for him, shall make and record an affidavit, in substance as follows:

STATE OF COLORADO } ss.
County of ———. }

Before me, the subscriber, personally appeared ———, who, being duly orn, saith that at least ——— dollars' worth of work or improvements were performed or made upon [here describe claim or part of claim] situated



in ——— mining district, county of ———, State of Colorado. Such expenditure was made by or at the expense of owners of said claim, for the purpose of said claim.

[Jurat.] [Signature.]

And such signature shall be *prima facie* evidence of the performance of such labor.

SEC. 16. RE-LOCATION OF ABANDONED CLAIMS.—The re-location of abandoned lode claims shall be by sinking a new discovery shaft and fixing new boundaries in the same manner as if it were the location of a new claim; or the re-locator may sink the original discovery shaft ten feet deeper than it was at the time of abandonment, and erect new, or adopt the old boundaries, renewing the posts, if removed or destroyed. In either case a new location stake shall be erected. In any case, whether the whole or part of an abandoned claim is taken, the location certificate may state that the whole or any part of the new location is located as abandoned property.

SEC. 17. ONE RECORD FOR EACH CLAIM.—No location certificate shall claim more than one location, whether the location be made by one or several locators. And if it purport to claim more than one location, it shall be absolutely void, except as to the first location therein described. And if they are described together, or so that it cannot be told which location is first described, the certificate shall be void as to all.

SEC. 18. All Acts or parts of Acts in conflict with this Act, are repealed.

SEC. 19. This Act shall be in force from and after June 15, 1874.

Approved February 13, 1874.

## AN ACT CONCERNING MINES.

*Be it enacted by the Council and House of Representatives of Colorado Territory:*

SEC. 1. RIGHT OF SURVEY AND INSPECTION.—In all actions pending in any district court of this Territory, wherein the title or right of possession to any mining claim shall be in dispute, the said court, or the judge thereof, may, upon application of any of the parties to such suit, enter an order for the under-ground as well as surface survey of such part of the property in dispute, as may be necessary to a just determination of the question involved. Such order shall designate some competent surveyor, not related to any of the parties to such suit, nor in any wise interested in the result of the same; and upon application of the party adverse to such application, the court may also appoint some competent surveyor, to be selected by such adverse applicant, whose duty it shall be to attend upon such survey, and observe the method of making the same; said second survey to be at the cost of the party asking therefor. It shall also be lawful in such order to specify the names of witnesses named by either party, not exceeding three on each side, to examine such property, who shall thereupon be allowed to enter into such property and examine the same; said court, or the judge thereof, may also cause the removal of any rock, debris, or other obstacle in any of the drifts or shafts of said property, when such removal is shown to be necessary to a just determination of the questions involved; *Provided,* however, that no such order shall be made for survey and inspection, except in open court or in chambers, upon notice of application for such order of at least six days, and not then except by agreement of parties, or upon the affidavit of two or more persons that such survey and inspection is necessary to the just determination of the suit, which affidavits shall state the facts in such case, and wherein the necessity for survey exists; nor shall such order be made unless it appears that the party asking therefor had been refused the privilege of survey and inspection by the adverse party.

SEC. 2. MANDATORY WRIT TO RESTORE POSSESSION.—The said district courts of this Territory, or any judge thereof, sitting in chancery, shall have, in addition to the power already possessed, power to issue writs of injunction for affirmative relief, having the force and effect of a writ of restitution, restoring any person or persons to the possession of any mining property from which he or they may have been ousted, by force and violence, or by fraud, or

from which they are kept out of possession by threats, or whenever such possession was taken from him or them by entry of the adverse party on Sunday or a legal holiday, or while the party in possession was temporarily absent therefrom. The granting of such writ to extend only to the right of possession under the facts of the case in respect to the manner in which the possession was obtained, leaving the parties to their legal rights on all other questions as though no such writ had issued.

SEC. 3. UNLAWFUL ENTRY.—In all cases where two or more persons shall associate themselves together for the purpose of obtaining the possession of any lode, gulch, or placer claim, then in the actual possession of another, by force and violence, or threats of violence, or by stealth, and shall proceed to carry out such purpose by making threats against the party or parties in possession, or who shall enter upon such lode or mining claim for the purpose aforesaid, or who shall enter upon or into any lode, gulch, placer claim, quartz-mill, or other mining property, or not being upon such property, but within hearing of the same, shall make any threats, or make use of any language, signs, or gestures, calculated to intimidate any person or persons at work on said property, from continuing to work thereon or therein, or to intimidate others from engaging to work thereon or therein, every such person so offending, shall, on conviction thereof, be fined in a sum not to exceed two hundred and fifty dollars, and be imprisoned in the county jail not less than thirty days nor more than six months; such fine to be discharged either by payment or by confinement in said jail until such fine is discharged at the rate of two dollars and fifty cents ($2.50) per day. On trials under this section, proof of a common purpose of two or more persons to obtain possession of property as aforesaid, or to intimidate laborers as above set forth, accompanied or followed by any of the acts above specified by any of them, shall be sufficient evidence to convict any one committing such acts, although the parties may not be associated together at the time of committing the same.

SEC. 4. GUILTY OF MURDER.—If any person or persons shall associate and agree to enter or attempt to enter by force of numbers and the terror such numbers are calculated to inspire; or by force and violence, or by threats of violence against any person or persons in the actual possession of any lode, gulch, or placer claim; and upon such entry or attempted entry, any person or persons shall be killed, said persons, and all and each of them so entering or attempting to enter, shall be deemed guilty of murder in the first degree, and punished accordingly. Upon the trials of such cases, any person or parties cognizant of such entry, or attempted entry, who shall be present, aiding, assisting, or in anywise encouraging such entry, or attempted entry, shall be deemed a principal in the commission of said offense.

SEC. 5. This Act shall take effect and be in force from and after its passage.

Approved February 13, 1874.

## PLACER MINING CLAIMS.

*Be it enacted by the General Assembly of the State of Colorado:*

SECTION 1. The discoverer of a placer claim shall, within thirty days from the date of discovery, record his claim in the office of the recorder of the county in which said claim is situated, by a location certificate, which shall contain: *First*, the name of the claim, designating it as a placer claim. *Second*, the name of the locator. *Third*, the date of location. *Fourth*, the number of acres or feet claimed. And *Fifth*, a description of the claim by such reference to natural objects or permanent monuments as shall identify the claim.

Before filing such location certificate, the discoverer shall locate his claim: *First*, by posting upon such claim a plain sign or notice, containing the name of the claim, the name of the locator, the date of discovery, and the number o acres or feet claimed. *Second*, by marking the surface boundaries with substantial posts, and sunk in the ground, to wit: One at each angle of the claim.



SEC. 2. On each placer claim of one hundred and sixty acres or more heretofore or hereafter located, and until a patent has been issued therefor, not less than one hundred dollars' worth of labor shall be performed or improvements made by the first day of August, 1879, and by the first day of August of each year thereafter. On all placer claims containing less than one hundred and sixty acres, the expenditure during each year shall be such proportion of one hundred dollars, as the number of acres bears to one hundred and sixty. On all placer claims containing less than twenty acres, the expenditures during each year shall not be less than twelve dollars; but when two or more claims lie contiguous, and are owned by the same person, the expenditures hereby required for each claim may be made on any one claim, and upon a failure to comply with these conditions, the claim or claims upon which such failure occurred, shall be open to relocation, in the same manner as if no location of the same had ever been made; *provided*, that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such location; *provided*, the aforesaid expenditures may be made in building or repairing ditches to conduct water upon such ground, or in making other mining improvements necessary for the working of such claim.

Upon the failure of any one of several co-owners to contribute his proportion of the expenditures required hereby, the co-owners who have performed the labor or made the improvements, may at the expiration of the year, to-wit: the first of August, 1879, for the locations heretofore made, and one year from the date of locations hereafter made, give such delinquent co-owner personal notice in writing, or if he be a non-resident of the State, a notice by publication in the newspaper published nearest the claim for at least once a week for ninety days, and mailing him a copy of such newspaper if his address be known; and if at the expiration of ninety days after such notice in writing, or after the first publication of such notice, such delinquent should fail or refuse to contribute his proportion of the expenditure required by this act [section], his interest in the claim shall become the property of his co-owners who have made the required expenditures.

[The foregoing was filed in the office of the Secretary of State by the Governor, March 12, 1879, without his signature, and became a law under Section 11, Article IV., Constitution of Colorado.]

## MISCELLANEOUS GENERAL LAWS, 1877.

### TAXATION.

*Extract from the Constitution of Colorado.*

ART. X., SEC. 3. MINES EXEMPT, Page 58.—Mines and mining claims bearing gold, silver, and other precious metals (except the net proceeds and surface improvements thereof), shall be exempt from taxation for the period of ten years from the date of the adoption of this constitution (July 1, 1876), and thereafter may be taxed as provided by law.

### PENAL PROVISIONS.

764. SEC. 169. FALSE WEIGHTS.—If any person shall knowingly have, keep, or use any false or fraudulent scales or weights for weighing gold or gold-dust, or any other article or commodity, every such person so offending shall, on conviction, be fined not exceeding five hundred dollars, or imprisoned in the county jail not exceeding six months.

765. SEC. 170. PUNISHMENT FOR CERTAIN MILL-OWNERS.—The owner, manager, or agent of any species of quartz-mill, arastra-mill, furnace, or cupel,

employed in extracting gold from quartz, pyrites, or other minerals, who shall neglect or refuse to account for or pay over and deliver all the proceeds thereof to the owner of such quartz, pyrites, or other minerals, excepting such portion of said proceeds as he is entitled to in return for his services, shall on conviction, be fined in a sum not exceeding one thousand dollars, or be imprisoned in the penitentiary not exceeding one year.

776. SEC. 181. SALTING ORES.—That every person who shall mingle or cause to be mingled with any sample of gold or silver bearing ore, any valuable metal or substance whatever, that will increase or in any way change the value of said ore, with the intent to deceive, cheat, or defraud any person or persons, shall, on conviction thereof, be punished by a fine not less than $500 nor more than $1,000, or by confinement in the penitentiary for a term of not less than one nor more than fourteen years, or by both such fine and imprisonment.

1603. SEC. 1. DESTROYING LANDMARKS.—That if any person or persons shall willfully and maliciously deface, remove, pull down, injure, or destroy any location-stake, side-post, corner-post, landmark, or monument, or any other legal land-boundary monument in this State, designating, or intending to designate the location, boundary, or name of any mining claim, lode, or vein of mineral, or the name of the discoverer, or date of discovery thereof; the person or persons so offending shall be guilty of a misdemeanor, and, on conviction thereof, shall be fined not more than one thousand dollars, or imprisoned not more than one year, at the discretion of the court; *provided*, that this act shall not apply to abandoned property.

673. SEC. 78. PASSING COUNTERFEIT GOLD-DUST.—Every person who shall mingle or procure to be mingled with any uncoined gold or gold-dust now current, or which shall hereafter be current in this State, any counterfeit gold-dust, or counterfeit uncoined gold, or any base metal or substance whatever, with intent to utter or pass the same, or to procure the same to be uttered or passed as gold-dust or uncoined gold, shall, on conviction thereof, be punished by a fine not to exceed one thousand dollars, or by confinement in the penitentiary for a term not less than one year nor more than fourteen years.

1961. SEC. 5. BUYING STOLEN ORE.—Any person, association, or corporation, or the agent of any person, association, or corporation, who shall knowingly purchase or contract to purchase, or shall make any payment for or on account of any ore, which shall have been taken from any mine or claim, by persons who have taken or may be holding possession of any such mine or claim, contrary to any penal law now in force, or which may be hereafter enacted, shall be considered as an accessory after the fact to the unlawful holding or taking of such mine or claim, and upon conviction shall be subjected to the same punishment to which the principals may be liable.

1962. SEC. 6. FALSE MILL WEIGHTS.—Any person, association, or corporation, or the agent of any person, association, or corporation engaged in the business of milling, sampling, concentrating, reducing, shipping, or purchasing ores as aforesaid, who shall keep or use any false or fraudulent scales or weights for weighing ore, or who shall keep or use any false or fraudulent assay scales or weights for ascertaining the assay value of ore, knowing them to be false, every person so offending shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be fined in a sum not exceeding one thousand (1,000) dollars, nor less than one hundred (100) dollars, or imprisonment not more than one year, or both, at the discretion of the court.

1963. SEC. 7. FALSE MILL RETURNS.—Any person, corporation, or association, or the agent of any person, corporation, or association, engaged in the milling, sampling, concentrating, reducing, shipping, or purchasing of ores in this State, who shall, in any manner, knowingly alter or change the true value of any ores delivered to him or them, so as to deprive the seller of the result of the correct value of the same, or who shall substitute other ores for that delivered to him or them, or who shall issue any bill of sale or certificate of purchase that does not exactly and truthfully state the actual weight, assay value, and total amount paid for any lot or lots of ore purchased, or who, by any secret understanding or agreement with another, shall issue a bill of sale or certificate of purchase that does not truthfully and correctly set forth the weight, assay value, and total amount paid for any lot or lots of ore purchased by him or them, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined in a sum not exceeding one thousand (1,000) dollars, nor less than one hundred (100) dollars, or imprisonment not more than one year, or both, at the discretion of the court.



1964. SEC. 8. LARCENY OF ORES.—If any person, lessee, licensee, or employe in or about any mine in this State, shall break and sever, with intent to steal the ore or mineral from any mine, lode, ledge, or deposit in this State, or shall take, remove, or conceal the ore or mineral from any mine, lode, ledge, or deposit, with intent to defraud the owner or owners, lessee, or licensee of any such mine, lode, ledge, or deposit, such offender shall be deemed guilty of felony, and, on conviction, shall be punished as for grand larceny.

### DRAINAGE OF MINES.

1820. SECTION 1. PROPORTIONATE SHARE.—Whenever contiguous and adjacent mines upon the same or upon separate lodes have a common ingress of water, or from subterraneous communication of the water have a common drainage, it shall be the duty of the owners, lessees, or occupants of each mine so related to provide for their proportionate share of the drainage thereof.

1831. SEC. 2. FAILURE TO DRAIN.—Any parties so related, failing to provide as aforesaid, for the drainage of the mines owned or occupied by them, thereby imposing an unjust burden upon neighboring mines, whether owned or occupied by them, shall pay respectively to those performing the work of drainage their proportion of the actual and necessary cost and expense of doing such drainage, to be recovered by an action in any court of competent jurisdiction.

1832. SEC. 3. DRAINING CORPORATION.—It shall be lawful for all mining corporations or companies, and all individuals engaged in mining, having thus a common interest in draining such mines, to unite for the purpose of effecting the same, under such common name and upon such terms and conditions as may be agreed upon; and every such association, having filed a certificate of incorporation, as provided by law, shall be deemed a corporation, with all the rights, incidents, and liabilities of a body corporate, so far as the same may be applicable.

1833. SEC. 4. FAILURE TO MUTUALLY AGREE.—Failure to mutually agree, as indicated in the preceding section, for drainage jointly, one or more of the said parties may undertake the work of drainage, after giving reasonable notice, and should the remaining parties then fail, neglect, or refuse to unite in equitable arrangements for doing the work, or sharing the expense thereof, they shall be subject to an action therefor as already specified, to be enforced in any court of competent jurisdiction.

1834. SEC. 5. COURT PROCEEDINGS.—When action is commenced to recover the cost and expenses for draining a lode or mine, it shall be lawful for the plaintiff to apply to the court, if in session, or to the judge thereof in vacation, for an order to inspect or examine the lodes or mines claimed to have been drained by the plaintiff; or some one for him shall make affidavit that such inspection or examination is necessary for a preparation of the case for trial. The court or judge shall grant an order for the under-ground inspection and examination of the lode or mines described in the petition. Such order shall designate the number of persons, not exceeding three besides the plaintiff or his representative, to examine and inspect such lode and mines, and take the measurement thereof, relating the amount of water drained from the lode or mine, or the number of fathoms of ground mined and worked out of the lode or mines claimed to have been drained, the cost of such examination and inspection to be borne by the party applying therefor. The court or judge shall have power to cause the removal of any rock, debris, or other obstacles in any lode or vein, when such removal is shown to be necessary to a just determina-

tion of the question involved; *provided*, that no such order for inspection and examination shall be made except in open court, or at chambers, upon notice of application for such order of at least three days, and not then except by agreement of parties, nor unless it appears that the plaintiff has been refused the privilege of making the inspection and examination by the defendant, his, or their agent.

1835. SEC. 6. WATER BEYOND CONTROL.—That hereafter, when any person or persons, or corporation, shall be engaged in mining or milling, and in the prosecution of such business shall hoist or raise water from the mines or natural channels, and the same shall flow away from the premises of such persons or corporations, to any natural channel or gulch, the same shall be considered beyond the control of the party so hoisting or raising the same, and may be taken and used by other parties the same as that of natural water-courses.

1836. SEC. 7. LIABLE FOR INJURY.—After any such water shall have been so raised, and the same shall have flown into any such natural channel, gulch, or draw, the party ss hoisting or raising the same shall only be liable for injury caused thereby, in the same manner as riparian owners along natural water-courses.

1837. SEC. 8. UNDEVELOPED MINES.—The provisions of this act shall not be construed to apply to incipient or undeveloped mines, but to those only which shall have been opened, and shall clearly derive a benefit from being drained.

1838. SEC. 9. ADMISSIBLE EVIDENCE.—In trial of cases arising under this act, the court shall admit evidence of the normal stand, or position of the water while at rest in an idle mine, also the observed prevalence of a common water-level, or a standing water-line in the same, or separate lodes; also, the effect (if any) the elevating or depressing the water by natural or mechanical means in any given lode, has upon elevating or depressing the water in the same, contiguous, or separate lodes or mines; also, the effect which draining or ceasing to drain any given lode or mine had upon the water in the same or contiguous or separate lodes or mines, and all other evidence which tends to prove the common ingress or subterraneous communication of water into the same lode or mine, or contiguous or separate lodes or mines.

ORE.

1957. SEC. 1. CONTENTS OF RECORD.—That every person, association, or corporation that shall be engaged in the business of milling, sampling, concentrating, reducing, shipping, or purchasing ores in the State of Colorado, shall keep and preserve a book in which shall be entered at the time of the delivery of each lot of ore:

*First*—The name of the party on whose behalf such ore is delivered, as stated.

*Second*—The name of the teamster, packer, or other persons actually delivering such ore, and the name of the owner of the team or pack-train delivering such ore.

*Third*—The amount or weight of every such lot of ore.

*Fourth*—The name and location of the mine or claim from which it shall be stated that the same has been mined or procured.

*Fifth*—The date of delivery of any and all lots or parcels of ore.

1958. SEC. 2. PROCEEDINGS WHEN ORE IS STOLEN.—Whenever affidavit shall have been made before any police magistrate of any town in this State, or any justice of the peace of any county, by any person, that ore has been stolen from him, stating as near as may be the amount and value of the ore stolen, such person upon presentation of a certified copy of such affidavit, shall have access to such book, and may examine the entries which may have been made therein during a period of fifteen days next preceeding the filing of such affidavit; *provided*, that the person making such affidavit shall, at the time of making the same, have a present interest in the product of the mine or claim from which said ore has been stolen, or in the ore alleged to have been stolen



1959. SEC. 3. FAILURE TO KEEP REQUIRED BOOKS.—Every person association, or corporation that shall fail or refuse to keep the book required by the terms of the first section of this Act, or shall fail or refuse to make a proper entry therein, or who shall make any false entry therein, or who sh refuse to any person who may be entitled to the same, as provided by secti two (2) of this Act, the right of inspection thereof, shall forfeit and pay for each and every violation of the provisions of said section a penalty of not less than fifty (50) nor more than three hundred (300) dollars, to be collected action of debt at the suit of any person who may sue for the same. In ad tion to such penalty, any person, association, or corporation violating the p visions of said first section, shall be liable at the suit of the party or persons aggrieved, in the proper form of action, for all damages which may accrue to any party or person by reason of such violation. And in all actions the f that a false entry has been made shall be *prima facie* evidence that the same made wilfully or knowingly.

1960. SEC. 4. FAILURE TO MAKE INQUIRIES.—If any person, association, or corporation shall fail or neglect to make theinquiries necessary to the making of the proper entries in said book, as provide in section one (1) f this Act, or shall so negligently make entries therein tha ny lot of ore can t be particularly identified, or so negligently that it cannot be perceived the from what person delivered any lot of ore or received the proceeds of the same when purchased, or shall fail to keep such book, or shall willfully suffer the same to be lost or mislaid, so that the same cannot be produced for inspecti such failure or neglect shall not excuse any party defendant in any suit brou under the preceding section from judgment for any penalty prescribed by s section.

WATER RIGHTS.

1798. SEC. 2. RIGHT OF WAY.—Whenever any person or persons are gaged in bringing water into any portion of the mines, they shall have the right of way secured to them, and may pass over any claim, road, ditch, or other structure; *provided*, the water be guarded so as not to interfere with prior rights.

1821. SEC. 11. All mining claims now located, or which may be hereaf r located, shall be subject to the right of way of any ditch or flume for mining purposes, or of any tram-way or pack-trail, whether now in use, or which may be hereafter laid out across any such lo tion; *provided, always*, that such right of way shall not be exercised against location duly made and recorded, and not abandoned prior to the establi ment of the ditch, flume, tram-way, or pack-trail, without consent of the owner, except by condemnation, as in case of land taken for public highways. Parol consent to the location of any such easement, accompanied by the completi of the same over the claim, shall be sufficient without writings; *and provi further*, that such ditch or flume shall be so constructed that the water fr such ditch or flume shall not injure vested rights by flooding or otherwise.

2779. SEC. 3. MINERS' INCH.— * * And water sold by the inch by any individual or corporation, shall be measured as follows, to-wit: Ev inch shall be considered equal to an inch square orifice under a five-inch pr sure, and a five-inch pressure shall be from the top of the ori of the box put into the banks of the ditch, to the surface of water; said boxes, or any dot or aperture through which such water may be measured, shall in all cases be six inches perpendicular inside measurement, except bo delivering less than twelve inches, which may be square, with or with slides; all slides for the same shall move horizontally and not otherwise; a said box put into the banks of ditch shall have a descending grade from the water in ditch of not less than one-eighth of an inch to the foot.

TAILINGS.

1804. SEC. 9. MINERS RESPONSIBLE.—In no case shall any person or person be allowed to flood the property of another person with water, or wash, down the tailings of his or their sluice upon the claim or property of other persons, but it shall be the duty of every miner to take care of his own tailings, upon his own property, or become responsible for all damages that may arise therefrom.

HAULING QUARTZ.

1805. SEC. 9. RIGHT OF WAY.—Every miner shall have the right of way across any and all claims for the purpose of hauling quartz from his claim.

MINING CLAIMS—REAL ESTATE—ACTIONS.

185. SEC. 26. DEFINITIONS.—The terms "land" and "real estate," as used in this chapter, shall be construed as co-extensive in meaning with the terms "lands, tenements, hereditaments," and as embracing mining claims and other claims, and chattels real. The term "deed" includes mortgages, leases, releases, and every conveyance or encumbrance under seal.

2126. SEC. 3. TRANSFERABLE INTEREST.—The owner of every claim or improvement, on every tract or parcel of land, has a transferable interest therein, which may be sold in execution or otherwise; and any sale of such improvement is a sufficient consideration to sustain a promise.

2131. SEC. 8. CLAIMANT MAY MAINTAIN ACTION.—Any person settled upon any of the public lands belonging to the United States, may maintain trespass *quare clausum fregit*, trespass, ejectment, forcible entry and detainer, unlawful detainer, and forcible detainer, for injuries done to the possession thereof.

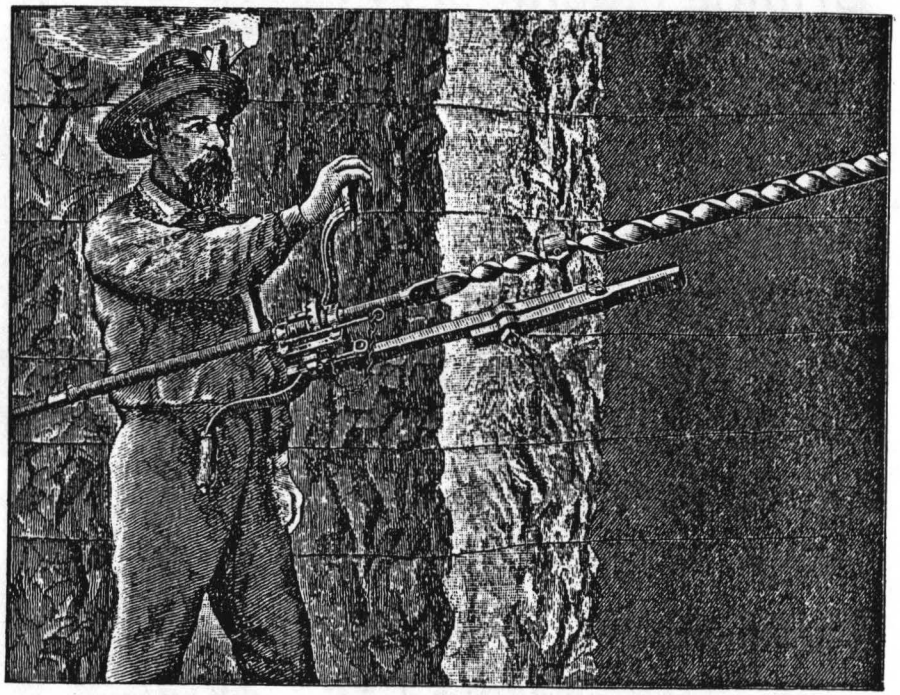
2135. SEC. 12. CITY AND VILLAGE LOTS.—Any person who may have a title to occupy any lot or lots within any city or village plot, or any lots or mining claim within any mining district in this State, in virtue of a certificate, deed of gift or purchase from the original claimant or claimants, or thir assigns, as well as all purchasers, under any decree or execution of the so-called provisional government courts, people's or miners' courts, of the lands situated within any city or village plot, or any lots, land, or mining claims situated within any mining district, together with the original claimant or claimants of said lots, land, or mining claims, shall be entitled to maintain the actions authorized by the eighth section of this chapter, against any and all persons who shall enter upon and occupy said lots, lands, or mining claims, or any of them; *provided*, it shall be lawful for the citizens of any mining district to declare an abandonment of any creek, river, gulch, bank, or mining claim a forfeiture of the rights of the claimants thereto; in which case the parties claimant shall not be enabled to maintain either of the actions mentioned in section eight of this chapter.

2136. SEC. 13. UNITED STATES TITLE.—Nothing in this chapter contained shall be construed to deny the right of the United States to dispose of any lands in this State; nor shall the fact that the title to any lots, lands, lodes, or mining claims hath not passed from the United States, be any bar to the recovery of the plaintiff in either of the actions specified in section eight of this chapter. As against the United States, and all persons holding any of said lands under the United States, or the laws thereof, this chapter shall be of non-effect and void.

F. E. TIFFANY, Pres. H. H. ASHLEY, Treas. JNO. A OPP, Sec. C. W. COLVIN, Supt.

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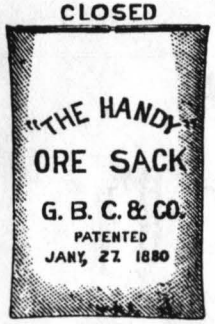
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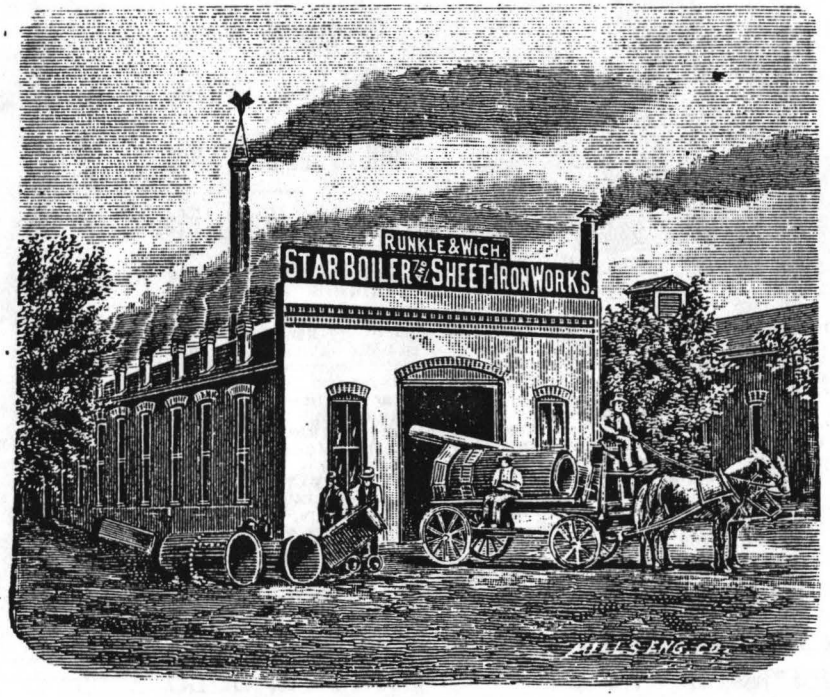
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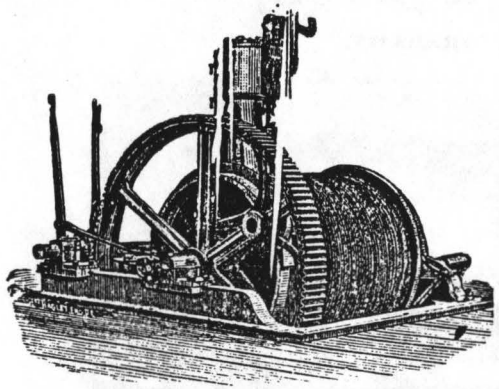
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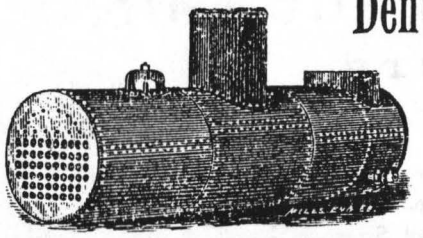
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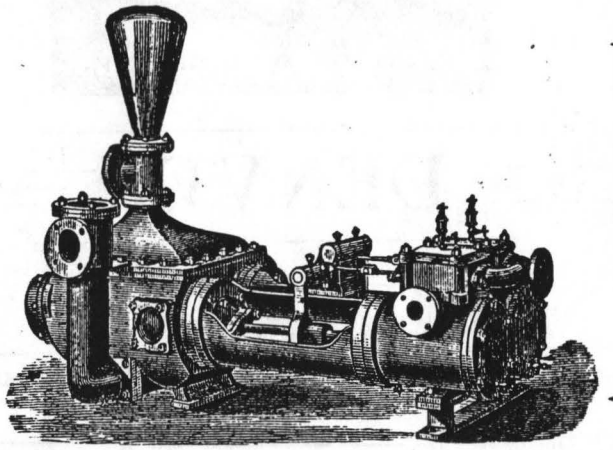
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